'PREDICTING THE FUTURE' IN VICTORIA'S CRIMINAL JUSTICE SYSTEM

A CASE STUDY OF THE DEPARTMENT OF JUSTICE

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‘Predicting the future’ in Victoria’s Criminal Justice System

A Case Study of the Department of Justice

This Case Study contains a range of insights, lessons and ideas for those wanting to establish, and/or improve their capacity to prepare for the future in their own organization.

**Background:**

Prior to the widespread use of data and better statistical analysis as tools of management, forward planning in Victoria’s public sector depended largely on the collective intuition of senior managers.

During the last quarter of the twentieth century however, the growing complexity of society and the increasing expectations of the community, led governments to begin exploring more systematic methods of identifying changes and other factors that could impact the future. In particular, the widespread availability of high capacity computers, gave managers a new capacity to analyse data - particularly trend data – using methodologies developed in the private sector.

Analysing past trends to predict future likelihood was a technique already well-known in physics, economics and some social sciences (notably demography) - but would it work in the criminal justice system? And what new factors were appearing on the horizon? What should Victoria’s Department of Justice be doing to maximise the Government’s preparedness for issues that are likely to emerge in the new millennium?

These were the questions confronting Department of Justice managers, when they established an Environmental Scanning and Forecast Modelling capacity to analyse the likelihood, nature and impact of emerging justice issues. The Environmental Scanning and Forecast Modelling functions have moved the Department to the leading edge of strategic management planning and preparation for the future.

**Previous Approaches**

During the 1970s, criminal justice statisticians and criminologists around the world developed elaborate multi-variate models to attempt to explain trends in crime, to predict future prisoner numbers and measure the deterrent effects of sentencing.

Commercial business used multi-variate trend analysis to forecast demand for products and services, so could the same techniques forecast ‘demand’ for police, courts and prisons?¹.

¹ ‘Multivariate trend analysis’ is used when trends in a key variable - e.g. sales - are thought to be the result of trends in a range of ‘causal’ variables, such as price, marketing and consumer demographics. Estimates of future sales can be inferred from knowledge of future trends in the causal variables.
Looking back, it is easy to see that the complexity of society and the wide range of factors that can -and sometimes do- ‘drive’ trends in crime and justice, were under-estimated.

There is still only general agreement about what sorts of things ‘drive’ offending patterns. A 2001 report to the Department of Justice\(^2\), by the Department of Criminology, University of Melbourne, identified six generic drivers of crime and the criminal justice system:

1. Changes in the demographic structure of the population.
2. Economic factors, especially changing rates of consumption and unemployment.
3. Illicit drug use and drug markets
4. The impacts of new legislation and policy.
5. Changes in resources directed at crime prevention and control (especially policing).
6. Systemic factors associated with re-offending and breaches of court orders.

When one considers the full range of issues encompassed in these six drivers, together with the wide range of different offence types they impact upon (Victoria Police separately identify 27 offence categories, some of which have distinct sub-categories), they easily expand into thousands of individual variables.

And even within this limited set of drivers, there are three issues that severely limit the capacity for predictive modelling:

- Not all of the information required to specify crime rate drivers is available.
- The statistical relationship between some drivers and their related crime rates is unknown, inconsistent over time, or inadequately specified.
- Only some of the drivers that predict crime rates can themselves be accurately forecast.

**Beginnings of a new approach to robust forecasting**

In 1983, Victoria’s (then) Office of Corrections began work on a ‘Corrections Master Plan’, which was to determine future prisoner accommodation requirements for Victoria, based on projections of prisoner numbers.

Observing that the age profile of prisoners was very stable over time, but that the Victorian general population itself was changing, with ‘large cohorts of young men’ moving through the age groups most likely to commit offences (ie; the 15-29 age groups), the original basic model used demographic projections to determine future trends in receptions to prison. The model assumed that times served by prisoners would remain constant for each offence type.

Elements of the prisons model allowed for the input of alternative hypotheses, such as changing offence patterns and changes in sentence types and lengths. These hypotheses were generated from discussions with police, courts and correctional staff at the time, and produced a range of alternative ‘futures’ for prisoner trends, upon which the prison construction plans and contingencies of the late 1980s/early 1990s were based.

This work produced results that proved to be sound bases for planning, so from the early-1990’s it became an integral part of the Correctional Services annual planning and budgeting process.

A key element was added in the late 1990s, to turn the process into an effective planning tool for the third millennium. That was the addition of an ‘environment scanning’ process, which locked the Department into a comprehensive ‘evidence-based’ approach to strategic planning.

It was this embryonic, combined Environmental Scanning and Futures Modelling capacity that Departmental management began to introduce across the entire Justice portfolio from around 1999-2000.

**Dual-faceted predictive process to inform strategic planning.**

Some organisations rely upon statistical trend projections to predict likely future scenarios, but such an approach ignores emerging factors that could dramatically alter long-term trend projections. Other organisations may devote significant effort to identifying possible future factors emerging on the horizon, without adopting a proper understanding of past organisational performance and capacity.

The combination of both of these two processes is important in predicting the most likely future scenarios.

Victoria’s Department of Justice is not only integrating both processes, but is surrounding them with a framework of checks and balances to underpin its future scenario predictions with as much evidence as possible.

The Department’s Environmental Scanning (or ‘horizon’ scanning-as some call it) process, seeks to identify contemporary issues arising on the horizon in the environment surrounding the criminal justice system in Victoria. The Futures Modelling process takes a longitudinal analysis of those factors that already drive the Victorian criminal justice system, and endeavours to predict how such drivers will impact the future justice system. All results generated by the two approaches are then rigorously tested in a series of expert workshops.

In the Justice portfolio, this is defined as ‘an analysis of surrounding influences or drivers potentially impacting the portfolio in the short and long term, that enables managers to determine where to position the department in the future.

Environmental analysis is a key part of the strategic planning process. Along with Futures Modelling, the intent is to provide comprehensive information on the current and future landscape to enable the Justice Portfolio to strengthen its evidence-based strategic planning and policy.’ The goals and principles of the justice system environmental analysis are shown in Table 1.

### Alignment with the Strategic Planning Cycle

The Victorian Government uses a four step ‘Integrated Management Cycle’ (IMC) of Planning, Resourcing, Service Delivery, Evaluation, to continuously improve its operations. The Department of Justice also promotes the Australian Business Excellence Framework’s ‘PDRI’ (‘Planning, Doing, Reviewing, Improving’) cycle of continuous improvement.

**Environmental Scanning and Futures Modelling** both inform each part of these cycles, but in particular they provide the bridge between the Evaluation/Review and Planning steps. This is done at each level of the organisation. However, environmental analysis should also be ‘dynamic’, meaning that in addition to conducting one annual, major analysis, surrounding influences on the Justice Portfolio should be recorded and analysed as they occur. Table 2 describes some of the major events in the strategic planning cycle for the Justice Portfolio, and indicates the points in the cycle where such Analysis should be undertaken.

### Table 1: Links to Strategic Planning

<table>
<thead>
<tr>
<th>Goals for Strategic Planning</th>
<th>Principles for Environmental Analysis</th>
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<tbody>
<tr>
<td>Outcome Driven</td>
<td>• Environmental analysis investigates past, determines present and explores future influences on the business to ensure that the portfolio positions itself to anticipate future trends, situations and events. It assists to understand the organisational environment and achieve Government outcomes for Justice.</td>
</tr>
<tr>
<td>Surrounding Influences</td>
<td>• Environmental analysis is based on comprehensive and wide-ranging research into surrounding influences, using a wide variety of source material. This ensures that the full range of factors in the Justice environment are considered in the strategic planning process.</td>
</tr>
<tr>
<td>Aligned</td>
<td>• Environmental analysis is conducted at key levels of the planning context (State, Portfolio and Business Unit/Agency), with information shared between and within each level, in order to support an aligned and focused strategic planning framework.</td>
</tr>
<tr>
<td>Continuous Improvement</td>
<td>• Environmental analysis is undertaken annually as part of strategic planning activities, reviewed and improved in line with the Australian Business Excellence Framework’s ‘PDRI’ (‘Planning, Doing, Reviewing, Improving’) cycle of continuous improvement.</td>
</tr>
<tr>
<td>Business Practice</td>
<td>• Regular environmental analysis is supplemented with ad hoc updates on important trends, situations and events, as they occur. The range of alternatives for addressing opportunities, risks and threats identified through environmental analysis are investigated.</td>
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<tr>
<td>People</td>
<td>• Environmental analysis is informed by a combination of quantitative (eg, statistical trend data) and qualitative (eg, expert opinion) information, consistent with the ‘best practice’ model of evidence based strategic planning. All interested staff are given the opportunity to participate in the environmental analysis process.</td>
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</table>

### Table 2: Aligning Environmental Analysis with the Strategic Planning Cycle - Key Dates

<table>
<thead>
<tr>
<th>Month</th>
<th>Report</th>
<th>Plan</th>
<th>Event/Outcome</th>
<th>Environmental Analysis Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>July monthly report to the Justice Ministers</td>
<td>Portfolio sets key strategic priorities and determines possible ERC bids.</td>
<td>Portfolio Executive Retreat</td>
<td>Workshops with business unit experts on trends</td>
</tr>
<tr>
<td>Sept</td>
<td>August monthly report to the Justice Ministers. 4th quarter performance report.</td>
<td>Business Units and Agencies develop strategic presentations.</td>
<td>Strategic Presentation to Justice Executive Committee</td>
<td>Expert analysis combined with forecast modelling to produce projections</td>
</tr>
<tr>
<td>Oct</td>
<td>September monthly report to the Justice Ministers. 1st quarter performance report.</td>
<td>Portfolio prepares and presents key strategic priorities for ERC 1.</td>
<td>Annual Report tabled Financial Report tabled PAEC Report tabled</td>
<td>Key analysis and projections feed Portfolio’s strategic priorities for ERC 1</td>
</tr>
<tr>
<td>January</td>
<td>December monthly report to the Justice Ministers. 2nd Quarter performance report.</td>
<td>Portfolio prepares business cases for ERC2. Portfolio and Business Units and Agencies prepare business cases within strategic priorities agreed by ERC1</td>
<td>Commence environmental scanning and analysis as part of Business Unit/Agency Strategic Planning Cycle for the next round of planning</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Strategic Planning Approach for the Justice Portfolio)
Environmental Analysis Framework

There are three key dimensions for classifying the surrounding influences on the organisation (see Figure 1). To ensure that strategic planning for the Justice Portfolio takes into account the full range of influencing factors, the framework includes a combination of the following components:

- **Environmental Change** including social, economic, technological, political and physical factors.
- **Government policy direction** including current and emerging state and federal government policies, and international laws and conventions.
- **Community perception and need**, including community confidence in public safety and awareness of rights, and stakeholder satisfaction with the way Justice delivers its services.

Environmental Analysis Process

A seven-step process is applied at each of the levels of the strategic planning framework at which environmental analysis should take place, ie; Portfolio and Business Unit/Agency levels:

**Step 1: Identify strategic questions and build analytical capability**

Identify strategic questions to be addressed in the planning process and develop tools that will inform the analysis of options.

**Step 2: Scan the surrounding influences affecting the business**

Apply environmental analysis tools to determine what is happening or is projected to happen at the Portfolio, Statewide, National and International levels.

**Step 3: Analyse impacts of drivers**

Analyse the information and assess the actual or potential organisational impacts on the Portfolio or business unit/agency.

**Step 4: Determine alternatives**

Investigate alternative ways of dealing with opportunities, risks and threats posed by surrounding influences.

**Step 5: Develop scenarios**

Develop scenarios and models to determine the likely outcomes of alternative approaches to dealing with surrounding influences.

**Step 6: Establish preferred direction**

Determine the likely advantages and disadvantages to the organisation of pursuing available alternatives and establish a preferred direction based on this assessment.

**Step 7: Review and Improve**

Assess the effectiveness of environmental analysis (the tools and the process), identify required improvements, and if necessary refine or redevelop the tools and/or process in future iterations of the planning cycle.

Portfolio-wide Environmental Analysis

In the Victorian Justice system, the department’s central Portfolio Planning Branch is responsible for co-ordinating and conducting macro-level (‘whole-of-justice’) annual scans of the environment and analyses of the business drivers at the state and portfolio levels.

These analyses are then made available across the entire department to inform business unit/agency strategic planning. This forms a model for the more detailed and focussed analyses undertaken by units/agencies, who are best placed to determine which information is most relevant to their business.

Figure 1: Environmental Scanning Framework
As shown in Figure 1, an integrated set of analytical tools is used to facilitate this work.

**Portfolio Environmental Scan:**
An analysis of the important social, technological, economic and demographic trends relating to the Justice Portfolio, that provides an evidence base for Strategic Plans. Examples of significant environmental trends are:

- The ageing of the Victorian population, which may result in fewer people being in the high-offending age groups, and therefore declining crime trends, but paradoxically might also result in increasing levels of fear of crime in the community.
- The emergence of technologies including the Internet and DNA analysis, and the resulting development of totally new forms of crime and new methods of detection of offenders.

**Significant Events Register:**
A register of important events or turning points affecting the Justice system that can be used to explain changes in statistical trend data and policy direction. Examples of key societal turning points are:

- The electoral changes that brought about ‘tough on crime’ policies.
- A number of multiple-fatality shootings (particularly Port Arthur), which resulted in changes to firearms legislation and subsequent reductions in firearms homicides.
- ‘Heroin droughts and floods’, which appear to have a significant impact on patterns of illicit drug usage and patterns of related property crimes.

**Quarterly Trend Analysis:**
An analysis of trend data (with a narrower focus than the Portfolio Environment Scan) generated by the Justice portfolio on a quarterly basis. Examples are recorded crime trends and sentencing patterns.

**Geographic Mapping:**
A means of representing statistical information by Local Government Area or postcode to enable visual analysis of data. Mapping can offer clues as to what factors are actively driving trends in offending, by identifying the characteristics of high-crime areas.

**Policy Matrices:**
A reference of important local, national and international policy directions that impact the Justice Portfolio.

**Community Perception Surveys:**
Stakeholder feedback about perceived safety and satisfaction with Justice service delivery.

Together, these tools provide Justice agencies and business units with comprehensive information about surrounding influences, in a synthesized format that is not otherwise available.

With the Environmental Scanning framework and toolkit in place, the Department of Justice is now focused on developing the capacity of business unit managers to exploit the use of the system and toolkit, to improve the quality of planning throughout the department.

Indeed, local environmental scanning and futures modelling expertise was a factor in the Australian Business Excellence Awards recent ‘Silver Award’ recognition (the highest in the nation this year and first for a public sector body) of the Public Correctional Enterprise ‘CORE’, and its strategic planning function.

The key common element in all of these criminal justice models is that they combine baseline trend data with the knowledge of departmental experts, the community and academia.
Futures Modelling

This process combines all that is known statistically about trends affecting Department of Justice’s responsibilities and all the expert knowledge that exists within and outside the department.

Although previously confined to the Corrections area, the Futures Modelling approach is now being extended across the whole criminal justice system in order to generate a common understanding of the challenges that lie ahead.

The Futures Modelling process builds on the environmental scanning process and has three key components:

- **Crime & Justice trend data analysis**
  The analysis of historic crime and justice data to extrapolate likely future trends, is the most quantitative and evidence-based part of the predictive process. It uses the Environmental Scan and the Significant Events Register to try to explain trends in offending and sentencing.

- **Futures Workshops:**
  Stakeholder workshops that use available data and expert opinion to devise possible future scenarios with likely implications for the Justice portfolio. This combined data analysis and expert opinion process is outlined in Table 3 (next page).

- **Forecast Modelling:**
  An analysis using statistical trend data to model the possible implications of future scenarios.

A family of computer models has been developed that is capable of modelling scenarios including:
- anticipated changes in rates of offending for each of the 27-offence classification used by Victoria Police;
- changes in ages of offenders;
- changes in reporting rates for each crime type;
- changes in rates of crime clearance by police, and arrest, summons and charge rates;
- changes in outcomes at court, including conviction rates; and
- changes in sentencing patterns.

The key common element in all of these criminal justice models is that they combine baseline trend data with the knowledge of experts from the department, the community and academia.

The ‘family’ of data bases and modelling systems is shown in Figure 2. Work is ongoing to develop the models themselves and improve the linkages between each component.

Crime & Justice trend data analysis

Trend data from all areas of the justice system are analysed to help identify the most important influences in future crime and justice patterns.

Demographic trends are the most predictable driver of change in the pattern and nature of crime.

The charts in Figures 3 and 4 are typical of the trend data presented to Futures Workshops, to stimulate expert thinking about likely scenarios.

‘Futures’ Workshops

These workshops commence with the key statistical trends, usually pre-circulated to invitees to stimulate their thoughts, and in the form of overheads at the workshop. The facilitator invites participants to speculate on how current trends may continue or change, and how new issues might emerge in the future.

Invitees include key academics and community group representatives, because they bring considerable outsider knowledge into the process, and prevent the discussions becoming too ‘introspective’ or blinkered.
Logically, there needs to be a staged series of workshops to cater for the complexity of the justice system: - likely future trends in offending must be identified before future trends in sentencing can be properly addressed, because the courts respond to new offending patterns by altering their sentencing responses. Likewise, future trends in corrections depend on the courses taken by offending and sentencing patterns.

Consistency of approach throughout the process is enhanced by ensuring overlapping representation in the Futures Workshops. Experts from the various business units participate in Workshops canvassing issues from other Business Units. That way, as far as possible, the strategic plans that emerge from the process:
- share a common understanding of the issues that they will face in the next five to ten years,
- are consistent with each other and work towards common goals, and
- provide a sound basis for portfolio-wide budgeting.

The workshops can use devices such as specific ‘futures studies’. Futurists often explain the purposes of futures studies3 as:
- imagining the possible,
- assessing the probable, and
- deciding on the preferable.

A number of techniques have been developed for assessing the longer term trends that could impact upon the justice system. These include such processes as Scenario Planning, Cross-Impact Analysis and Issues Management, and involve applying subjective and creative processes to anticipating alternative futures.

While government agencies have traditionally regarded such speculative activity as something for the academic world, it can be a particularly valuable exercise.

Informed by the environmental scan and significant events register (together with a global review of justice developments), a long-term ‘vision’ workshop can be a worthwhile inclusion in the forecasting process.

The Department of Justice is currently developing a study of the best ways in which futures studies can be incorporated into its strategic planning processes, and during 2001-02 held exploratory workshops on both long-term futures of courts and of corrective services. Table 3 outlines a typical Futures Workshopping process now utilised in the Justice portfolio.

**Scenario development**

Once trends are identified in the workshops, the key questions are, ‘What is causing these trends?’ and more interestingly, ‘What caused the trends to change direction?’, ‘Was it some change in the socio-environmental conditions?’ or ‘Was it triggered by some new policing strategy or a change in sentencing practices?’.

Demographic trend is the most predictable driver of change in the nature and pattern of crime. For example, we know that property crime is more prevalent amongst younger teenagers whilst violent crime behaviour peaks amongst older teenagers, and older people are the prevalent cohort who go to court for more sophisticated and organised crimes such as fraud and deception (Figure 3a). The numbers of people in these age groups (Figure 3b) can be readily used to explain past underlying trend increases in key categories of crime and forecast longer-term future reductions as the Victorian population ‘ages’.

Significant patterns in the incidence of crime can often also be discerned from broader socio-economic, technological and political shifts, though these are more random and less predictable into the future.

The impacts of drivers of crime such as loss of community cohesion, increasing diversity in family and community structures, and crises of confidence in public institutions are difficult to quantify but these are recognised as factors to be addressed in crime reduction and prevention strategies.

Researchers also cite potential impacts from economic issues such as globalisation and multi-jurisdictional crime, widening income gaps and economic grey power, which are less within the direct control of State Governments.

Technological advances are creating new opportunities for crime detection and investigation as well as new types of (cyber) crime. Over 70% of Australians aged 16 years and over now have Internet access, and there are already some warning signs that increasing Internet access is not only creating opportunities for mass victimisation for the traditional older fraudster but also encouraging this behaviour in younger offenders.

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The Futures Workshops use the scenario development insights of participants, to achieve consensus about where the trends are likely to go in the future. Participants are asked to identify and - wherever possible - quantify likely future trends in key justice indicators, such as rates of reception to prison and average sentence lengths. (Some examples are shown in Table 4.)

### Table 4. Examples of trends observed or anticipated by workshop participants, by Offence.

<table>
<thead>
<tr>
<th>OFFENCE</th>
<th>SOCIETY</th>
<th>QUAINTIFIED TRENDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROBBERY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High proportion of offences are illicit drug related.</td>
<td>Current drug trend away from heroin, therefore there may be some reduction in drug-related robberies.</td>
<td>Police successfully targeting repeat offenders. Average prison sentence lengths may increase due to increase in proportion of re-offenders. High breach rates for those given community orders. Rates of arrest to continue along recent upward trend. Increase of 5% in average prison sentence length.</td>
</tr>
<tr>
<td><strong>BURGLARY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High proportion of offences are illicit drug related.</td>
<td>Decrease in drug related offenders aged under 20, but increase in drug related offenders aged 20-30 years.</td>
<td>Increased use of burglar alarms. Better detection due to focus on second-hand dealers. Impact of policy on drugs and diversion may slow receptions. Increase of sentence length due to increase in re-offending. No net change in reception rate. Increase of 5% in average prison sentence length.</td>
</tr>
<tr>
<td><strong>FRAUD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater use of technology in financial dealings.</td>
<td>Recent increases in fraud over the Internet. Major corporate frauds being detected via increased auditing vigilance.</td>
<td>Difficulty posed by trans-national nature, and lack of police training in detection. Courts reluctant to impose custodial sentences on white collar offenders. Possible rise in reception rate. No change in sentencing patterns.</td>
</tr>
<tr>
<td><strong>BREACHES OF COURT ORDERS</strong></td>
<td>Decreased acceptance of authority?</td>
<td>Increasing, especially in Suspended Sentences and Intervention Orders. Increases may result from more effective enforcement activity. Administrative discretion and increased resources for alternatives to prison may reverse the trends. Follow trends up next year, peaking and then down by 10% in later years.</td>
</tr>
</tbody>
</table>

Each type of offence must be considered independently, because they have different ‘driver’ characteristics or different impacts on the justice system (frequently both). There may evidence to suggest that the most recent trends will continue. Or circumstances that have produced recent trends may no longer be relevant.

Some workshop participants may have quite divergent views about future trends, and their views may form the basis of alternate scenarios. It is common for the workshops to generate a number of distinct hypotheses, which can be aggregated into ‘worst-case’, ‘optimistic’, and ‘most likely’ scenarios.

A worst case scenario, for example, may be generated by assuming that all of the least desirable trends and none of the more desirable ones will occur.

It is most important that the outcomes of each workshop are documented, so that as actual trends subsequently emerge they can be compared with those predicted by workshop participants. This enables fine-tuning and improvement in subsequent workshops. For example, plans may be initially based on the ‘most likely’ scenario, but as subsequent trends are monitored it may be realised that the ‘optimistic’ scenario was the more ‘accurate’ of the original forecasts.

While the ‘failure’ of a forecast can deliver as much learning as an accurate projection, obviously when large amounts of funds are being committed to any subsequent plans (that are based upon such forecasts), there must be an inherent variation margin.

**Forecast Modelling**

Identified trends along with ‘expert' assumptions about emerging pressures and the impact of current crime reduction strategies, such as those generated by expert workshopping, can be factored into simple forecasting models to determine likely service demand flows across the criminal justice system as a whole.

For example, two such forecast scenarios, ‘A’ and ‘B’ (Figure 5), can assist estimates of demand for policing services, and the down-stream impacts on the Courts and Correctional services.

The ‘A’ scenario assumes a continuation of the long-term mostly upward trends in offending that have been evident in the last decade. The ‘B’ scenario projects the results of an expert workshop, which considered that more recent trends in offender rates, including the downturns in some types of property crime rates, were likely to prevail over the next decade. Both are influenced by the continued growth in the population aged 15-24 whose rates of offending are likely to remain high, but Scenario B reflects the likely impact of a range of possible policies and strategic settings.
Criminal Justice System Workload Analysis

Using alternative scenarios such as those above, the Department's criminal justice system computer model can project the numbers of alleged offenders appearing before the courts and subsequently receiving a correctional order.

The alternative scenarios dramatically indicate how crime prevention and reduction strategies and the more effective diversion of offenders could significantly reduce the growth demand pressure on courts and corrections.

This level of sophistication and detailed modelling was recently used to reflect the forecast impact of strategic initiatives in the Government's Reducing Offending Strategy.

This was to support the development of the Corrections Long Term Management Strategy (Figure 6) and its accompanying 10 Year Master Plan for Prison Facilities.

The modelling included the anticipated impact of home detention initiatives, which have yet to be commenced. Subsequent modelling has supported the prisoner number projections and also assisted in determining the best locations for an expanded/strengthened Community Corrections program.

Forecast modelling, has also helped the Department to identify the areas where its lack of knowledge is most problematic.

While the Department of Justice has a good understanding of demand trends in correctional services and the impact of some strategies, further work is required to gain a similar understanding of other ‘drivers’ and trends.

This applies particularly to 'reidivism rates’, where more data collection, research and analysis is required to assess the effectiveness of rehabilitation and post release services.

Figure 6. Expected Impact of Long-term ‘Reduced Offending’ Strategy on Prisoner Numbers

Outcomes from the Process

Outcomes from the process include:

- A better understanding of the broad environment in which the criminal justice system operates.
- A comprehensive analysis of recent offence trends, crime clearance rates, numbers of persons proceeded against, court outcomes, correctional populations etc.
- The proceedings of the workshops, including both the scenarios themselves and the expert comments and insights that lie behind them.
- Greater evidence supporting the results produced by the process, including 20-year trend estimates of expected numbers of:
  - crimes reported to police, expected numbers of crimes cleared, numbers of persons charged, numbers of persons appearing in courts, sentencing outcomes, and correctional populations.
- A better understanding of what might be achievable, and what is needed to achieve the objectives of the portfolio.

The separate agencies in the portfolio still work independently on their own strategic plans, within the department’s overall strategic planning framework and strategic directions for Criminal Justice in Victoria. However, individual agency plans can now be linked - and made mutually consistent - through a common set of objectives, an understanding of the likely outcomes, and the forces that are driving trends in justice.

**What Next?**

The Justice Department is working towards an integrated planning system, which allows for the independence of many of its key components, including police and courts, while simultaneously ensuring that their planning shares a common understanding of the problems and challenges to be faced by the portfolio over the foreseeable future.

**Learnings for Others**

**Management Commitment:**

To successfully implement a forecast modelling capability in a complex portfolio, the first requirement is management commitment to enable the necessary data to be collected, the necessary research to be conducted, and the necessary ‘joined-up’ thinking to take place between business units.

It might be trite to say that an ‘evidence-based’ strategy requires evidence, but it is not always easy to generate strategic information from systems largely designed to produce day-to-day management data.

Conducting strategic-level research is difficult, costly and often has an uncertain payoff, particularly if it involves cross-portfolio collaboration. And focussing on the problems at hand, at business unit level, often leaves little time for thinking laterally in a joined up way. Commitment to solving all these problems has to come through encouraging business unit managers to think in cross-portfolio ways.

**Expertise/Technology Required:**

This is not rocket science - in essence it is merely ‘knowing what's happening’, ‘knowing what works’, and ‘knowing how to measure it’. The technology and skills required are routine - it does not require sophisticated software, giant super-computers, nor teams of mathematicians. The forecasting models constructed for the Department of Justice have all been built in standard spreadsheet software such as Microsoft Excel, so that all of the logic is visible and they can be modified as required by competent spreadsheet users.

The input data are generally based on standard workload, flow and output measures, together with research-tested relationships between the variables. The environmental scan and significant events registers have been built by staff in the research and statistics section of the central Portfolio Planning Unit, using a Lotus Notes departmental intranet database, but could perfectly well have been created in other standard software packages.

Because of the size and complexity of the portfolio, the Department of Justice philosophy is to decentralise the modelling work as much as practical, although the centralised Portfolio Planning Branch provides support, advice and a degree of coordination.

The conduct of the workshops is, however, critical to the process, and requires organisational skills such as the preparation and circulation of trend analyses, the optimal selection of invitees, and a strong ‘facilitative’ approach to nurture cross-portfolio thinking.

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