

Futures Research and Decision Making: Examples and Reflections

By

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Much of this article has been drawn from a report by the Millennium Project of the American Council for the United Nations University' entitled "Factors Required for Successful Implementation of Futures Research in Decision Making," by Theodore J. Gordon and Jerome C. Glenn, September 1999. This report was prepared for the U.S. Army Environmental Policy Institute and published in the "State of the Future at the Millennium" August 2000.

The purpose of this report was to identify and discuss the reasons for success or failure in the use of futures research in reaching timely decisions. Several techniques were used to achieve this purpose, futurists, business planners, and scholars were surveyed via a three-round "Global Lookout" questionnaire; decisionmakers and policy advisors were interviewed; correspondence among futurists was conducted individually and via group email (listserv); and selected articles were reviewed. In addition, the futures research experience of the authors of this report provided useful background.

"Foresighting activities cause impacts to organizations (or society) in a variety of ways most of which are extremely difficult to measure. As a result, foresighting organizations tend to rely on high-level buy-in and public legitimization as signs of their effectiveness."¹

Firm examples of timely decisions in response to early warnings from futures research are difficult to identify. Fortunately, there are some notable exceptions. Forecasts of ozone depletion led to the timely decisions in the Montreal Protocol. Human rights forecasts by the KGB led to Perestroika. Population forecasts led to family planning. AIDS forecasts led to massive research and prevention programs. Forecasts in the books such as *Silent Spring* and *Limits to Growth* stimulated many environmental protection programs.

Futures methods and perspectives are also useful to decisionmaking by creating alternative futures and choices that add to conventional wisdom. For example, futurist Herman Kahn (pioneer of alternatives thinking via alternative scenarios and Genius Forecasting²) proposed an alternative scenario that identified a gap in US defense: all the early warning systems in the US and Canada looking north would be irrelevant if the USSR decided to launch missiles over the South Pole.

In addition to informing decisionmaking, futures research can be used to change priorities, provide a context for understanding the meaning of the present, change attitudes of

¹ Skumanich and Silbernagel. *Foresighting Around the World*, Battelle Northwest National Laboratory, 1997

² These and other futures research methods are available in the *Futures Research Methodology* (500 pages) on CD-ROM by the Millennium Project.

organizations. The future cannot be known, but future possibilities and consequences can be explored, and based on such considerations, decisions can be made to influence the outcome of events and trends. Clearly it is better to be forewarned than not.

The Global Lookout Panel of the Millennium Project identified and rated the following (via the questionnaires) as the top ten *impediments* to timely use of early warnings:

1. **Institutional:** the fact that no one has responsibility to act; lack of adequate coordination among responsible ministries and agencies; institutional inertia
2. **Financial:** lack of funding or the fact that the people who ought to pay are unwilling to do so
3. **Disinterest in the future:** near term issues gain more attention than those that have more distant future consequences
4. **Planning inadequacy:** lack of a long-term view
5. **Personnel:** lack of decision skills - decisionmakers do not understand the complexities of the issues about which they must decide
6. **Strategic:** lack of clear-cut strategy and goals, lack of coordinated actions among actors
7. **Complexity:** lack of understanding of the magnitude of problems; lack of models showing complex interdependence of events and policies; lack of understanding of consequences of actions; stereotypical thinking
8. **Political:** the action interferes with national interests or it has been proposed by a political opponent; lack of involvement of regions, corporations, and specific groups
9. **Information:** lack of accurate, reliable and sufficient data and information, or the uncertainty of the risk; conflicting information; lack of coordinated scanning
10. **Lack of consensus:** differing interests and ideology among key actors, politicians, public, and particularly lobbying groups

Barriers to the use of futures research in timely decisionmaking can also include *moral factors*. Those identified and rated by the Millennium Project's Global Lookout Panel as the greatest *moral impediments* were:

- Insufficient attention to the needs of future generations
- Caring about the well-being of only one's own group or nation
- Corruption of political leaders, policy makers, corporate leaders
- Waste
- Greed and self-centeredness
- Economic inequities
- Lack of a holistic view of the world; fragmentation among many people
- Undue pressures from lobbying groups
- Lack of respect for the environment
- Non-action, the most server corruption; honor in leadership is to assume responsibility
- Lack of compassion and tolerance for others

Drawing on the interviews with policy makers, short case studies of successful uses of foresight activities, and the Global Lookout Panel's identification and rating factors that contribute to the timely use of early warning information the following check list of making futures research more effective in decisionmaking was created. It is not reasonable to expect that all of the following recommendations can be implemented in every application of futures research for decisionmaking. Nevertheless, the more of these that can be done, the greater the likelihood of successful implementation of futures research in decisionmaking will be.

1. Make sure leaders or decisionmaker(s) to whom the information is intended know what futures research is and is not, are interested in the process, have requested the activity, and all those involved in the process are clear about the objectives and mission of the activity. Ideally, this would include a statement of what the decisionmaker(s) would consider to be a successful outcome.
2. Confirm that futures research has or will have a formal connection to the strategic planning process that is understood by all involved and that they understand that futures research provides a framework for thoughtful discussion, rather than predictions.
3. In addition to the decisionmaker(s), identify and work with a champion of the activity within the organization.
4. If the decisionmaker(s) lack the knowledge or do not understand the complexities of the issues about which they must decide, include workshops or training during the research. As appropriate use simulations or models showing complex interdependence of events, policies, and consequences of actions that can challenge stereotypical thinking. If possible, include discussion of the moral barriers to timely decisionmaking.
5. Integrate the producers of futures research and the decisionmaker(s) into the overall process as much as possible.
6. Information should not be limited to quantifiable projections, but include rich subjective descriptions of alternative futures that makes future possibilities more real for the decisionmaker(s).
7. Include diverse different interests groups and key actors in the research process to make sure that the information is created about how a contemplated decision may affect stakeholders and to reduce subsequent political impediments. Enlist the support of people in this process who will use or be affected by the activity.
8. If there is a lack of clear-cut strategy and goals for the futures research to address, then include this as an issue in the research.

9. Determine who has the responsibility to act on the information, if no one, then make this an issue in the research, and if appropriate, bring this to the news media. Similarly, determine if there is adequate coordination among responsible departments, if not, then make this an issue in the research as well.
10. Include the decisionmaker(s) in the research process to counter any lack of a long-term views and short-term dominance over more distant future considerations.
11. Use at least one formal method that is understandable to all involved.
12. Provide information that demonstrates unequivocally that a crisis is pending to counter institutional inertia.
13. Include knowledge about what is possible, such as technological changes, to counter disbelief that change is impossible. Include information about the success or failure of other institutions and countries that had similar problems and have attempted to implement policies. If possible cite inspiring success stories.
14. Make options or recommendations simple, clear, and precise and deliver them in political, cultural and social (non-technical) terms, connected to goals and strategies.
15. Demonstrate the technical feasibility of recommendations including required personal, institutional, and technological changes to counter decisionmaker's fear of failure.
16. Connect the costs to the benefits of the recommendations to increase the willingness to pay. Decisionmakers and political leaders have used "financial impediments" as an excuse not to act; but tend not to see finance as the primary reason for inaction.
17. If the information and data are inaccurate, unreliable, conflicting, and/or insufficient, then expose the problem, collect best judgements, and suggest ways of making decisions within the uncertain environment.
18. If possible, include the intended actions of related institutions, lobbyists, decisionmakers related to the recommendations.
19. Develop and popularize appropriate indicators in coordination with other related institutions in the design and implementation of policy recommendations.
20. Use testimony of eminent scientists, including information of their estimates about probability and risks associated with issues and their policy solutions.
21. Clarify the forecasted condition with and without action, as set of long-term scenarios, ranging from dreadful to positive.

22. Establish linkages to other similar activities in government and industry, here and abroad, so that diverse inputs are possible and inputs can flow from non-conventional sources.
23. Be innovative in the method of presenting findings to avoid information overload.
24. In addition to more analytic methods, include a workshop toward the end of the research to give time for individuals, including the decisionmaker(s), to integrate the concepts in their thinking in a group setting.
25. Consider how to include the media in the issue in consultation with the decisionmaker(s). Examples include making the research available on the Internet, holding press conferences, opening communications with public communities and other research institutions, and even consider how to popularize the work via cooperation between artists (e.g. Spielberg) and futurists in film, television, and other media.

Make the work continuous and cumulative so that what is learned in one iteration is carried over to the next. It should not be a one time event, but an on-going process of feeding information to the decision process and responding to feedback from impacts.

Examples of Futures Research used for Decisionmaking

Depending on how one defines "success", as well as how one defines "foresight", there could be many success stories - many, differing examples which could be given to substantiate the claim made above. Some people consider foresight to be successful if it helps an organization avoid a danger it might not otherwise have avoided or to take advantage of an opportunity it might otherwise not have known about. Others consider foresight successful if it helped a firm beat a competitor or to secure greater market share. Some organizations rely on external futures consultants to point out dangers and opportunities. Other organizations (far fewer, but an increasing number) develop an internal foresight capacity for themselves. Some believe successful foresight points out exceptional developments, while others believe that while useful foresight should point out unusual situations, it is best when vision and foresight become part of routine decisionmaking.

The two examples of the use of futures research in decisionmaking that are presented below describe applications in different types of organizations, for different purposes and in different circumstances.

1. Futures in the Virginia Judiciary: A Continuing Success Story³

1. Focus: State
2. Sponsor: Government agency (judicial branch)
3. Application Domain: Strategic Planning
4. Techniques Employed: Visioning, Environmental Scanning, Participatory Methods

Impediments: There were no impediments to be overcome. A respected Virginia Judge heard futurist James Dator give a talk. The Judge who was on the board of the new State Justice Institute (SJI) secured funding for "Futures and the Courts". He got the Virginia Court of Justice and court administrator to apply for the funds and received a SJI grant; set up the judiciary's Futures Commission, which did its work over two years, resulting in the process described below. The key was an initial study which produced a mission statement and outlined 10 visions for the state judiciary; leaders who understood what foresight is and is not; expectation that the study would produce operating guide lines.

Players involved: Academics, representatives of the judiciary, and a group of people broadly representative of the state of Virginia.

Desired outcomes. Visions that could be used to develop action items and operating recommendations.

Measures of success: Approximately 70% of the actions recommendations have been adopted, the work continues with scanning and an annual updating process; creation of a Futures Commission which will reassess the future with citizen and professional input.

The Virginia Judiciary case has many features that proved to be beneficial in the design and outcome of this work:

1. Visionary and continuing leaders who understood what foresight is, and is not (especially that it is not fortune telling; not "predicting" the future), and who expected foresight to help guide daily routine decisions;
2. An initial visioning process which brought all (or representatives of all) of the stakeholders in the organization together in a lengthy and sustained process which resulted in a clearly-articulated and widely-shared vision for the preferred future of the organization;
3. A broadly-participative and iterative process which then used that vision to develop a detailed strategic plan for the organization;
4. Administrative decisions and actions, which then defined each of the strategic goals as specific tasks which were then assigned to specific people (or offices), with specific

³ Prepared by Professor James Dator, University of Hawaii, as a special contribution to this report.

targets for completion, and sufficient budget and personnel assigned. These tasks are then monitored until they are completed;

5. An ongoing internally-led process which regularly scanned the environment of the organization for new challenges and opportunities which might impinge on the vision and/or the tasks, which information was then evaluated by senior administrators, and the previously-assigned tasks modified as deemed appropriate;
6. Occasional scans contracted from external sources, which were then internally evaluated and used to make necessary changes;
7. And the entire visioning process was itself revisited at appropriate (perhaps ten-year) intervals, again in a broadly-participative and extensive way.

Chief Justice Harry Carrico, Circuit Judge John Daffron, Executive Secretary (the chief court administrator) Robert Baldwin, and Judicial Planner Kathy Mays (later joined by Beatrice Monahan) provided the initial and continuing leadership for the activities from the 1980s. The State Justice Institute (a federal funding agency) in 1987 supported the creation of a judicial futures commission, chaired by Robert M. O'Neil, President of the University of Virginia. This Commission carried out extensive and intensive futures activities throughout the State, and eventually developed a mission statement and a set of ten visions for the future of the Virginia Judiciary. These were formally presented to a group of people broadly representative of the State of Virginia who gathered, in 1988, in the historic Rotunda, designed by Thomas Jefferson, on the campus of the University of Virginia.

The Commission's Report, *Courts in Transition*:

"...offered ten visions to serve as a foundation for the courts of the next century and to paint a picture of the preferred future for the courts. Likewise, 131 specific recommendations were developed to provide a sense of direction for the future. The report then was presented to the Judicial Council of Virginia. The Council is the Virginia judiciary's highest policy-making body.... Following wide distribution of the report within and outside the court system and a comprehensive review by the Council, 90% (118) of the Commission's recommendations were adopted.

"Very importantly, the Council then selected a sub-set of the recommendations to be implemented within the next biennium. These recommendations formed the basis of Foresight 2000: The Judiciary's Strategic Plan for FY 1990-92. Approximately 70 percent of the action items selected for implementation during this time frame have been accomplished. Among others, the direct results include: 1) the establishment of alternative dispute resolution programs within the court system to expand the types of forums in which the public can choose to resolve legal disputes; 2) the introduction of numerous automated systems to link court system data bases with attorney's court-related agencies, and the public, for improved efficiency, accountability and convenience in using the courts; 3) the passage of legislation to create a family court system to provide a more effective and more comprehensive means of addressing family disputes; and 4) the establishment of a consumer research and service development

project. The purpose of this latter project is to provide continuous information to decisionmakers within the judiciary from citizens, litigants, and others on the substantive law changes and new products and services they desire from the courts." (Kathy Mays, p. 33)

Foresight 2000 has been updated by the judiciary planning staff every two years to coincide with the budget cycle. The themes outlined in Virginia's Courts at the Millennium: 1999-2001 Strategic Plan Themes, as identified by environmental scanning, consumer research, and constituent research, are "1. Surrounded by Technology: Life in the 21st Century; 2. Keeping Pace with Change; 3. Providing Justice in an Increasingly Segmented Society; 4. Fulfilling the Service Imperative; and 5. Therapeutic Justice: Redefining the Role of the Courts."

It is doubtful that so many of these accomplishments would have been attained without the careful accounting and monitoring process, which the Virginia Judiciary also developed and put in place. As Kathy Mays describes it:

"To help ensure that the judiciary's plans for its preferred future actually are realized, the state court administrator's office maintains an annual management planning process. Through this process, responsibility for assisting the local courts in implementing the specific action items contained in the up-dated strategic plan is divided among the office's various departments. Without this means for accountability and follow-up, there would be no way to translate the full strategic plan into annually obtainable objectives. The importance of this implementation process cannot be over-emphasized. And, as has been demonstrated time and again in planning efforts, the absence of such a link invites 'pie in the sky planning' as opposed to pragmatic agenda setting for the courts." (Kathy Mays, p. 34)

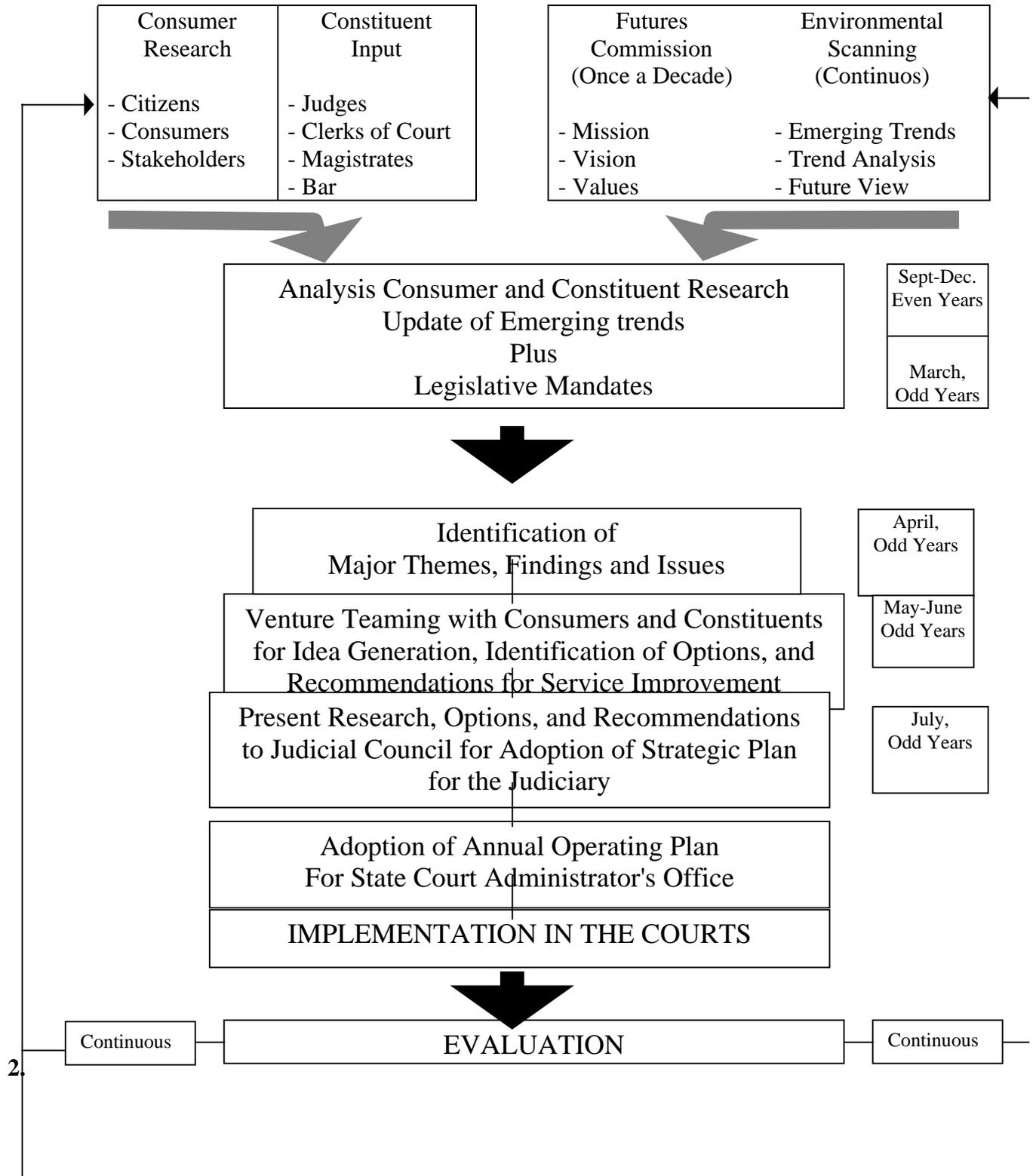
A flow chart of the overall activities just described, as developed by the Virginia Judiciary, and titled, "The Judiciary's Strategic Planning and Management System," is shown in Figure 1

Appendix E contains several attachments related to the "Futures in the Virginia Judiciary: A Continuing Success Story". Attachment One shows the Mission Statement and the ten Visions from the Strategic Plan for Virginia's Judicial System, originally promulgated in 1988. Attachment Two shows the Objectives and Tasks associated with just one of those Visions (Number Four) as an example of the objectives and tasks assigned for each of the ten visions. Attachment Three is a page from "The Special Projects" spread sheet for FY '95, and Attachment Four is a page from the Project Monitoring System computer printout, showing who is assigned to each task, how many hours are to be devoted to it (and were actually spent on it) and a start and finish date for each task.

A new Futures Commission, which seeks to reassess the future anew with increased citizen and professional input indicated on the flow chart in Figure 1, is anticipated as the foresight cycle begins again.

Figure 1

The Judiciary's Strategic Planning and Management System



USAID: Jamaica 2015 as input to USAID/Jamaica’s Country Strategy Plan⁴

1. Focus: National
2. Sponsor: Government agency
3. Application Domain: Strategic Planning
4. Techniques Employed: Environmental Scanning, Snowball Delphi, Scenarios, and Vignettes
5. Impediments: disbelief in positive change and value of looking at longer-range futures

Keys to overcoming impediments: Strong support of the futures thinking by the USAID Mission Director and involvement of local participants.

Players involved: Futurist consultant, staff of the sponsoring organization (USAID), and a cross-section of Jamaicans.

Desired outcomes: Creation of a country strategy plan, to be used for allocation of USAID funds.

Measures of success: Resulted in a modification to USAID’s Jamaica development strategy.

Figure 2



The USAID Mission Director for Jamaica visited Santa Fe Institute. As a result, she was interested in bringing a futures perspective to their planning.

USAID creates a “country strategy plan” for each country in which it works. This plan is the

⁴ Jerome C. Glenn. *Jamaica 2015: A Discussion of Possibilities, Policies, and Strategies*, Washington, DC:USAID, 1995

basis for the allocation of funds and programs. The USAID Mission in Jamaica contracted a futurist in 1995 to produce a report on the future of Jamaica that was used as a common reference by sector consultants (agriculture, education, etc.) to revise the country strategy for Jamaica. The report called *Jamaica 2015: A Discussion of Possibilities, Policies, and Strategies* lead to the introduction of information technology as an “overarching theme” (along with donor coordination and community development) to the USAID/Jamaica program which focuses on economic growth, environmental management, and increased opportunities for disadvantaged youth. The information technology theme is to be considered in each of these programmatic foci. About ten percent of their five-year program budget was allocated to this new theme.

During the two weeks given the futurist to work in Jamaica, several methods were used:

1. **Environmental Scanning** via the use of a range of reports, government data, articles, and listening to talk radio shows to identify a preliminary set of trends and issues to prepare the futurist to conduct a Snow Ball Delphi through a series of interviews.
2. **Snow Ball Delphi** asked: a) what were the forces that shaped Jamaica over the last 20 years; b) how are they likely to change over the next twenty years, c) what policies and developments could alter these; and d) what new developments or forces are possible to shape Jamaica by 2015. The Snow Ball Delphi was conducted as a series of interviews based on the accumulation of previous responses. It began by interviewing several senior staff within USAID to involve them in the process early. This helped identify key documents to study, and which Jamaicans to interview. These initial interviews also collected their judgments about trends, potential futures, and other factors that could shape the future of Jamaica in 2015. These judgments were then used as the basis for interviews with a cross-section of Jamaicans. The snowball “effect” is from sharing the previous views with the next interviewees and using their suggestions as to the next people to interview. Interviewees were assured that no attributions would be made.

A standard **Delphi** with repeating questionnaires asking panelists to offer and rate positions is an objective process. But a Snowball Delphi is more subjective, because the interviewer is developing the on-going synthesis from a linear sequence of interviews. Hence, the interviewer must be knowledgeable about the subject. The Snow Ball Delphi produced a rich array of information used to write a set of scenarios.

3. Three **scenarios** to the year 2015 were produced:

Business-as-usual: extension of current trends and dynamics

Tele-Jamaica: connecting Jamaicans working overseas to the development process at home

The Pits: unlucky conditions and unwise policies from current dynamics

The scenarios made clear that policy intervention was necessary, because business-as-usual

resulted in an undesirable future. These scenarios packaged a large amount of information in digestible pieces that demonstrated that the most cost-effective strategy was information technology (IT) based. In addition to giving the *Jamaica 2015* report to the sector consultants, USAID required that they also address how IT could affect the future of their sector in Jamaica. As a result, IT became one of the three themes to be included in each of the three elements of USAID Jamaica's development strategy. To further develop this new area of USAID/Jamaica programming, the futurist was contracted a second time to give further detail to the TeleJamaica scenario with several **vignettes** - stories within a scenario to give greater detail to illustrate concepts within an overall scenario. The vignettes were used to identify and prioritize the initial set of development activities under the IT theme of their strategy.

Appendix E: Attachments related to "Futures in the Virginia Judiciary: A Continuing Success Story" example

Attachment1: Mission Statement and the 10 Visions from the Strategic Plan for Virginia's Judicial System

Mission

To provide an independent, accessible, responsive forum for the just resolution of disputes in order to preserve the rule of law and to protect all rights and liberties guaranteed by the United States and Virginia Constitutions.

Vision 1

In the future, all persons will have effective access to justice, including the opportunity to resolve disputes without undue hardship, cost, inconvenience or delay.

Vision 2

In the future, the court system will maintain human dignity and the rule of law, by ensuring equal application of the judicial process to all controversies.

Vision 3

In the future, the judicial system will be managed actively to provide an array of dispute resolution alternatives that respond to the changing needs of society.

Vision 4

In the future, Virginia's judicial system will be structured and will function in a manner that best facilitates the expeditious, economical and fair resolution of disputes.

Vision 5

In the future, the courts of Virginia will be administered in accordance with sound management practices which foster the efficient use of public resources and enhance the effective delivery of court services.

Vision 6

In the future, the court system will be adequately staffed by judges and court personnel of the

highest professional qualifications, chosen for their positions on the basis of merit and whose performance will be enhanced by continuing education and performance evaluations. Lawyers, who constitute an essential element in the legal system, will receive a quality pre-professional and continuing education befitting the higher professional and ethical standards to which they will be held, and the need to become increasingly service-oriented in their relationships with clients.

Vision 7

In the future, technology will increase the access, convenience and ease of use of the courts for all citizens and will enhance the quality of justice by increasing the courts' ability to determine facts and reach a fair decision.

Vision 8

In the future, the public's perception of the Virginia judicial system will be one of confidence in and respect for the courts and for legal authority.

Vision 9

In the future, the impact of changing socioeconomic and legal forces will be systematically monitored and the laws of Virginia will provide both the substantive and procedural means for responding to these changes.

Vision 10

In the future, the judicial system will fulfill its role within our constitutional system by maintaining its distinctiveness and independence as a separate branch of government.

Attachment 2: Objectives and Tasks associated with Vision 4

Vision 4

In the future, Virginia's judicial system will be structured and will function in a manner that best facilitates the expeditious, economical and fair resolution of disputes.

Objective 4.1

To structure the judicial system in a manner that best enables the prompt, fair and cost-effective resolution of disputes.

Task 4.1.1

Propose legislation to expand the jurisdiction of the Court of Appeals to include all civil appeals with a commensurate number of judges and staff to handle the increased workload.

Task 4.1.2

Propose legislation to authorize the Chief Justice to designate and temporarily assign any judge, with his or her consent, to sit at any trial court level.

Task 4.1.3

Conduct a study of the venue statutes to identify jurisdictional distinctions which, if eliminated, would make access to courts more effective.

Objective 4.2

To simplify legal procedures to enhance judicial effectiveness and efficiency.

Task 4.2.1

Continue to seek adoption of legislation to provide that, when a preliminary hearing is held, establishment of probable cause at that hearing will be sufficient to initiate a trial in the circuit court without indictment by the grand jury.

Task 4.2.2

Develop and conduct a pilot test using videoconferencing for appellate arguments, based on the experiences of other judicial systems and the needs of Virginia's appellate courts.

Task 4.2.3

Monitor the joint study on local rules being conducted by the Senate and House Courts of Justice Committees.

Objective 4.3

To create a single trial court with comprehensive jurisdiction for the handling of legal issues relating to children and families.

Task 4.3.1

Secure funding to establish the family court in Virginia.

Attachment 3: a page from the "1998 - 1999 PPMS Special Projects " spread sheets

Attachment 4: This is a page from the Project Monitoring System computer printout, showing who is assigned to each task, how many hours are to be devoted to it (and were actually spent on it) and a start and finish date for each task.

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Sources used for the case "Futures in the Virginia Judiciary: A Continuing Success Story":

Courts in Transition. A Report of the Commission on the Future of Virginia's Judicial System, Supreme Court of Virginia, 1989.

Foresight 2000: A Strategic Plan for the Judicial System of Virginia. Supreme Court of Virginia, (Biannually since 1990. Current version is FY 1998-99).

Future View. A Quarterly Newsletter of Trends and Issues. Judicial Planning Department, Office of the Executive Secretary, Supreme Court of Virginia (since 1992)

Kathy Mays, "Futures Research and the Judiciary: Virginia's Experience," *Futures Research Quarterly*, Spring 1994, Vol. 10, No. 1, 31-35.

The Public as Partners: Incorporating Consumer Research into Strategic Planning for Courts, Judicial Council of Virginia 1994.

Virginia's Courts at the Millennium: 1999-2001 Strategic Plan Themes. Judicial Planning Department, Office of the Executive Secretary, Supreme Court of Virginia, April/May 1999.

Some Thoughts on Foresight⁵

Futures Studies can be placed on a continuum in comparison with: reacting, muddling through, administration, prediction, forecasting, planning, "outlook"/"lookout", strategic risk-management, foresight(ing), futures studies/research, science fiction, fortune telling, spiritual revelation.

A very important question in distinguishing futures work is "When does 'the future' begin?" How far "forward" in time can we go before first encountering "the future?" For example, where does "administration" end and "planning" begin, and then "foresight" begin, etc.? Different groups define those boundaries differently, and indeed the boundary is no doubt different for different classes of actions, depending on the life-cycle of the object of concern, for example.

Another continuum useful in distinguishing foresight from other future-oriented work might run from considering a single "most likely" future; to high/medium/low futures of a single theme/variable; to the development of best case/worse case scenarios; to the concept "an alternative future" (meaning "alternative to the what most people think the future will be," thus perhaps a kind of "preferred future"); to genuinely "alternative futures" (meaning true alternatives to the present as well as to "the most likely" future); finally reaching actual futures research with its insistence on the term "futureS" rather than "THE future" along with the envisioning and movement towards "(a) preferred future(s)"

Another mark of futures work includes the importance of consciously articulating and distinguishing between "images of the future" which underlie all future orientation, even that which believes it has no conscious future orientation at all. So also is the use of (and/or faith in) primarily quantitative methods vs. primarily qualitative methods.

Some people believe that the success of futures work is best measured by whether consciousness has been raised/changed, or not, while others insist that that is not enough and that actual actions have to be taken more or less directly from the use of foresight for it to be deemed "successful." Some note, however, that "the future has a long fuse" and that direct action may be taken, but not immediately, so that "consciousness raising" is thus probably the best proximate measure of a successful futures activity.

Whether the external environment around an entity is taken as given, or is itself problematic, is

⁵ This Appendix is extracted from material written by Dr. James Dator for this project.

an important distinguishing feature between foresight (which problematizes the environment) and other future-oriented work (which takes the external environment as granted)

In addition, some activities demand longer time horizons--military, space, energy, transportation, insurance. It may be easier and more imperative for such organizations to be future-oriented and to want to use futures research. Others (such as the typical manufacturer and retailer), can be quite successful for a long time--maybe forever--without considering "the future" at all; just be observant and adaptive; muddling through will do except in major system breaks.

Whether one takes a strictly "free market" laissez faire, libertarian approach, or whether one assumes a totally centrally-planned economy and society, foresight is still needed. Foresight is not something "socialists" do but "capitalists" do not, or vice versa.

LIBERTARIAN FORESIGHT If each private economic entity engaged in and/or used foresight, then (according to Libertarian assumptions) that would aggregate, via the invisible hand, to the closest approximation possible of foresight for the commonweal. No strictly "governmental foresight" would be necessary, or desirable.

CONSERVATIVE FORESIGHT. On the (slightly more visible) other hand, under "maximum privatization/ that government is best which governs least" type assumptions, governments might buy and use foresight supplied by many competing private producers.

LIBERAL FORESIGHT. Under assumptions of the desirability of a more proactive system of governance which seeks to intervene and act on behalf of the common good, each government unit might either engage in foresight or have ready access to foresight produced by one or more other governmental units. All governmentally-produced foresight should be available freely to any citizen, and itself subject to democratic control.

Each governmental unit and individual citizen should also have the opportunity to buy privately-produced foresight (however, some privately-funded futures research might be owned entirely and kept secret by the funder).

AUTHORITARIAN FORESIGHT. Finally, according to certain totalitarian assumptions, the government might have a monopoly on foresight, requiring all units of society, including economic sectors, to use the foresight provided by government experts alone. All private (or foreign) foresight would be forbidden.

D.3. Does Futures Research Help Decisionmaking? Two Views

The Project asked professional futurists and policy makers to identify examples and experience in the uses of futures research in decisionmaking, in four ways. The first two have already been described: in depth interviews with policy makers and the Lookout Panel. The second two methods were:

A request was made via the project's two Internet listserves for examples of futures research and futures studies used in decisionmaking.

Private correspondence was established with professional futurists asking for more detail about projects in which they might have been involved.

In many instances, participants in this aspect of the study suggested publications of theirs and others that were made available via hard copy and on various web sites (see Appendix F). The team followed up these leads and this activity is reported in this section.

The Millennium Project listserves were invited to comment on “cases that illustrate how futures research has helped improve policy.” These listserves are made up of several hundred people: professional futurists in one instance, and people who expressed interest in the future in the other. The results of the on line discussion were surprising. One camp said policy making always considers- formally or informally- the future. A second camp said they had been searching for such examples for years and had failed to find that futures research had contributed significantly to policy making. As an example of the first position, one professional futurist said:

The first camp argued that future orientation is inevitable, unavoidable and is almost always a part of decisionmaking. A correspondent taking this position said:

All decision and policy making which is goal oriented, with the relatively minor exception of cathartic choices in their pure form, are based in part on images of the future of probably outcomes of different options including doing nothing. Therefore, all structured and organizational policy making includes some arrangements for more or less systematic exploration of relevant contingent futures.

Prime illustrations include the constant use of "intelligence estimates" in security and external relation choices and the constant use of economic models in many economic decisions.

Indeed, most of the literature dealing with policy making, descriptive-historic as well as prescriptive takes up the use of "futures", sometimes well and sometimes badly so, but still usually explicitly.

This is even more pronounced in the very large literature on "planning" in all its forms, where "futures" in one way or another are a main concern -- both predictively and as a target for impact.

Therefore, I am not sure about the "point" in seeking literature on uses of futures in policy making.⁶

And another futurist responded:

....images of the future guide **all** goal-oriented decision or policy making. I would strengthen the statement you make to:

⁶ Listserv correspondence, Yehezkel Dror, Nov. 25, 1998

All decision and policy making which is intended to achieve values set by the parties who will be subject to the decision or policy, is based on visions of the future, expressed or implied, which arises from each option presented, including doing nothing. Other decision and policy making is conducted by trusting elite individuals or groups to perform such an analysis emotionally without reference to external, shared models that the parties affected can verify, and is restricted to situations where the risk of sharing the information is (perceived to be) greater than the risk of choosing an undesirable outcome.⁷

But the other view held:

The issue is critical, and it would be good to pinpoint real examples (of policies where futures research) made a difference. I might say that, over the last year, I have looked in the literature and in conversations for examples in one area: the SRI/Shell Oil/GBN approach to scenarios. I have not found a single case, including Shell's, in which policy choice flowed directly from the scenarios. Other important values were achieved, at least partially, but not this--which I take to be the basic reason for doing FR.⁸

And another professional said:

As you know, it is VERY difficult to "prove" that futures activities result in effective subsequent action. I know of no good study which has done that (do you?), and certainly have no clear evidence in anything I have done over the past 30 years.

Indeed, I have submitted funding proposals to for four years in a row..... to engage in a study to find out if indeed the ten years of foresight.....(much of which I have been very directly involved in) has in fact resulted in anything significant and lasting. "Does the future matter" is one way I phrased it.....

So I can't honestly answer your question. And, as I looked over what other people sent in to you, I don't think they can either, in spite of their claims.⁹

Unfortunately, policy making is usually impervious to futures studies. Predictions of the future can usually be picked apart and disregarded. Time horizons can be impossibly short. All the futures studies on global warming have not yet moved US policy in the directions recently endorsed by the administration...Political pressures are more important than futures studies.

Which introduces another methodological problem: some of the best futures work is based on an organization (or person) stating, and working towards, a preferred future, very broadly stated, while other is based on scanning for highly specific problems/opportunities and trying to avoid/obtain them; others yet is aimed specifically at monitoring competitors in

⁷ Listserve correspondence, Craig Hubley, Nov. 26, 1998

⁸ Private correspondence, Wayne Boucher, Nov. 28, 1998

⁹ Private correspondence, Jim Dator, Nov. 25, 1998

order to stay/get ahead of them in market share, for example, and much futures work seems to be just some person having a bright idea which may or may not be used to form policy and guide action (most of the material I have been sent has been of failures, not successes, or of possible, but certainly not conclusive, successes).¹⁰

Why this dichotomy? During the preparation of this report, the Millennium Project engaged the services of a professional futurist to identify and validate case studies. In the end, the futurist abandoned the research- at least for the time being. He gave several reasons for doing so:

1. Most material on the subject simply states that success was achieved but is short on real evidence.
 2. Business examples are often proprietary.
 3. There is no adequate typology for classifying the cases and their methodology.
1. Only very few foresight activities are carried out in house by trained professionals who are knowledgeable in the methods of futures research.

Individual Decisionmaking as a Mirror of Socio Political Decision Making

That futures thinking is pervasive and implicit in socio-political decisionmaking is borne out by studies of decisionmaking by individuals drawn from cognitive psychology and neurology. Holland et. al. for example, suggest that individuals make decisions based on mental models held in their brain that are “transient, dynamic representations.” These models are of the “if--then” sort. For example, if a deal offered seems to be too good to be true, be cautious about accepting it because it is likely not to be true. Or if faced by life threatening situations, then react to protect self and family. Such models are used to make predictions about the need for and consequences of individual actions. The models are predictive, based on experience, and are modified as new learning by the individual takes place. The models lead to rules for decisionmaking and rules become “a network of interacting, competing, not necessarily consistent hypotheses” In the contest between conflicting hypotheses, the rule that leads to successful prediction “is strengthened, ... increasing the likelihood of its use in the future....” and those that lead to error are “modified or discarded.... Predications about the attainment of goals will normally be the most powerful source of feedback.”¹¹

It is easy to make the assumption that this vision of decisionmaking by individuals parallels the processes of socio-political decision making used by leaders or groups. Paraphrasing Holland et. al., one could say: decisions are always based on explicit or implicit models. Such models are used to make predictions about the need for and consequences of action. The models are predictive, based on experience, and are modified as new learning takes place. The models lead to rules for decision making and sometimes the rules are not necessarily consistent. In the contest between conflicting hypotheses, the rules that have led to successful results in the past are used

¹⁰ Private correspondence, Jim Dator, March, 1999

¹¹ John Holland, Keith Holyoak, Richard Nisbett, and Paul Thagard. "Induction", MIT Press, 1989. p.16. Suggested by Paul Werbos in conjunction with studies of the editor into the decision process.

more frequently and those that have led to error in the past are rarely used again.

In this analogy, political necessity in socio-political decision making is parallel to self preservation in individual decisionmaking. Sometimes in the social sphere other factors weigh more heavily than political necessity, as other factors are sometimes more important than self preservation for the individual.

This parallel between the processes of induction in an individual and in socio-political decisionmaking can be carried further. Individual decision making is often befuddled by psychological inconsistencies. For reasons that have not yet been discovered, the mind sometimes thinks in patterns that appear to be irrational.¹² Good bets that make sense in economic terms often seem risky; risky ventures sometimes seem like sure things. The way a question is posed affects the answer. Beliefs are formed by first impressions. Value is assigned where none exists. We depreciate mentally to avoid admitting a loss. We are very reluctant to cut losses on loosing projects. We value our self esteem and will go to great lengths to avoid admitting that we have acted in a way that was less than ideal. We invent and believe the explanations we invent for our poor performance. We ignore or do not believe information that contradicts our beliefs. We are overconfident. The list is longer, but it is clear that what appears to be intrinsic in individual decisionmaking is mirrored in the distortions of socio-political decision making.

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¹² Most of the examples of irrationality in decision making come from the work of Amos Tversky and Daniel Kahneman who have been exploring this intersection between economics and psychology by have groups of people make choices under varying experimental circumstances. Their work dates to the early '70's. and they stimulated and contributed many articles, papers and books to this field, generally called Judgment Heuristics. For an early paper see, Tversky, Amos and Kahneman, Daniel, "Judgment under Uncertainty: Heuristics and Biases," *Science*, 185 (1974), 1124-1131.