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IISD REPORT

GovernAbilities: The nexus of sustainability, accountability and adaptability

Essential tools for successful governance in the 21st century

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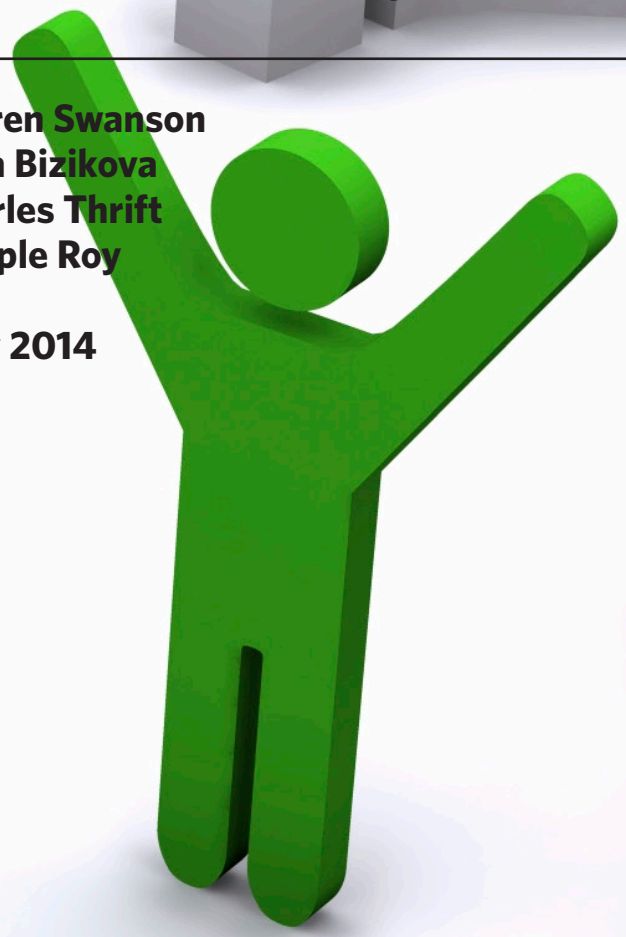
May 2014



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Abstract

Governments today are challenged more than ever in three operational areas: pursuing sustainable development, being accountable to the public for the expenditure of taxpayer dollars, and anticipating and adapting to critical and cumulative risk. Efforts within government to improve performance in these three core abilities of governance have been advancing largely independently over the past two decades, despite an apparent commonality in the basic principles and tools that drive them. Often concurrently, finance and treasury departments create and implement cross-government accountability frameworks, environment departments promote sustainability internally and externally and audit departments build capacity for risk analysis and management. The complexity and urgency of 21st century issues is an unforgiving place for uncoordinated efforts of such scale and importance. This paper provides timely guidance to help governments at all levels improve their ability to effectively and efficiently pursue sustainability, accountability and adaptability. We refer in this paper to the collective pursuit of these three abilities of governance as *governAbilities* and suggest that they are core to successful governance in the 21st century. The common principles that underlie these *governAbilities* are highlighted along with a set of pragmatic tools that can be used to achieve them.

Keywords: sustainability, accountability, adaptability, adaptive management, adaptive policy-making, governance, public management, public policy

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1.0 Introduction: The Three Core Demands of Governance in the 21st Century

For governments at all levels, the 21st century is shaping up to be difficult terrain to navigate. A global economic crisis in 2008 catalyzed calls for increased accountability in financial institutions and nations for their investment and fiscal practices. The shift called for a green economy approach to ensure that government stimulus is compatible with the environment and sustainable development in general. At the same time, governments are being pressed by various sectors and communities to assess risk and provide guidance and capacity for adapting to systemic issues such as climate change, economic recession and fluctuating food and energy prices. And to make matters even more complex, many of these systemic issues are comingled. The 2011 and 2012 global risk reports of the World Economic Forum highlights an array of interrelated global risks, including, for example, a developing and looming global water-energy-food security crisis (World Economic Forum, 2011).

The sheer scale of our natural resource and industrial development activities, combined with awesome global connectivity with respect to social media, markets, and public and private partnerships, provides a prologue to this century of the likes never before experienced in human history. This presents an unparalleled challenge to governments in effectively delivering their services and providing strategic guidance to businesses, organizations and citizens.

Decision-makers face a number of challenges across social, economic and environmental domains. Most of these challenges are dynamic and intertwined, pointing to a need to design policies that can account for uncertainty and address the complexity and unintended consequences of policy decisions and actions (Bazilien et al., 2012; Millennium Ecosystem Assessment, 2005)—all in a multistakeholder context (Walker, 2002). For governments and policy-makers, this requires proactively and effectively identifying points of intervention within the complex structures and systems and ensuring interventions are able to adjust to changes in the system (World Economic Forum, 2012).

In this context of immense complexity, three core areas of governance have come to the forefront as essential for success in the 21st century and for earning a "social licences to operate" among citizens. These three areas are: sustainability, accountability and adaptability.

Sustainability

Sustainability is the guiding paradigm for development that the United Nations brought forth in 1992 at the Earth Summit in Rio de Janeiro and was re-affirmed by all countries at the 2012 Rio+20 Conference (United Nations, 2012). The paradigm was introduced as a shared vision of development for all nations that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987). Current discourse interprets "needs" as society's aspirations for maintaining or improving well-being, as evidenced by the Better Life Index that the Organization for Economic Cooperation and Development (OECD) uses to compare countries (OECD, 2013), and even happiness, as evidenced by the popularity of Bhutan's Gross National Happiness index (Royal Government of Bhutan, 2012a, 2012b). The well-being and happiness discourses merged in 2012 in the High-level Meeting on Wellbeing and Happiness – A New Economic Paradigm, convened at the United Nations headquarters in New York (Royal Government of Bhutan, 2012b). The sustainable development paradigm has also infused the business world, as evidenced by such practices as the triple bottom line (Elkington, 1997) and corporate sustainability reporting (Global Reporting Initiative, 2013).

Nobel Prize-winning economists Joseph Stiglitz, Amartya Sen and J. P. Fitoussi perhaps best consolidated the well-being/happiness and sustainability paradigms in their seminal report, *Measuring the Social and Economic Progress of Societies*. Specifically, they noted that "the time is ripe for our measurement system *to shift emphasis from measuring economic production to measuring people's well-being*. And measures of well-being should be put in a context of sustainability" (Stiglitz, Sen, & Fitoussi, 2008, p. 12; emphasis in the original). They advocate that attention be paid to measuring and tracking well-being with respect to such aspects as health, education, personal activities, environmental conditions, social connections, political voice, insecurity, inequalities and proximity to dangerous levels of environmental damage. The key point is that the attainment of current well-being should not compromise the ability of future generations to meet their needs.

Sustainable development encompasses many deeply entrenched values, and "it requires nothing less than a revolution in thinking, a reconsideration of old problems and approaches (which might confirm some older perceptions and solutions, but will certainly question others)" (Spangenberg, 2010, p. 126; Swanson et al., 2004). Among many things, this implies a need for new approaches to planning that reconcile short-term electoral cycles with long-term priorities and that are tailored to the ideals of sustainable development (Pisano, Berger, Endl, & Sedlacko, 2011). In addressing this, governments are increasingly engaged in developing sustainable development strategies (SDS). As of 2009, 98 countries had developed strategies; of those, 82 are already implementing them (Bruckner, 2009). Experiences with the development and implementation of these strategies could provide key directions for pursuits in this field and provide lessons for future policy design and planning. Although, sustainable development is being undertaken at different levels of government, in this paper we focus on strategies led by government agencies.

Accountability

Accountability is increasingly demanded by the public (i.e., the tax payers) and media to justify expenditures by government, public agencies and international governing bodies (Walker, 2002). In its simplest sense, accountability requires people to explain and take responsibility for their actions: "the giving and demanding of reasons for conduct" (Roberts & Scapens, 1985, p. 447; cited in Sinclair, 1995, p. 220). When measuring accountability, we need to consider who is accountable to whom, for what are they accountable, in what ways they are accountable and what the consequences are.

Governance systems that are accountable to the public evaluate decision-makers on their ability to meet goals and targets that are evidence-based and measurable. As a result, accountability is a way to influence how decision-makers allocate resources and implement actions (Drake, Halle, & Wolfe, 2012). For public agencies specifically, we are concerned about whether government agencies are under some control and oversight by us or our representative institutions. However, this understanding only covers part of their responsibility as "accountability may best be understood as a necessary but insufficient component of responsibility" (Gregory, 1995; cited in Walker, 2002). This means that accountability is a form of responsibility the institution (and/or the person) holds to carry out their mandate and execute actions as well as to provide information about their action or justify it before a review authority (Sinclair, 1995).

Adaptability

Adaptability is the third core governance ability for the 21st century. It does not matter if you are the finance department, the health department or the natural resource department, the landscape of economic, social and environmental issues is constantly changing in unpredictable ways, demanding nimble and robust plans, policies and programs. The business sector already knows from experience that large corporations must innovate or die (Tellis, 2013; Christensen, 1997) and that the only certainty is that surprises happen (Taleb, 2007). In 2009, Swanson and Bhadwal wrote about creating adaptive policies and published a guide for policy-making in an uncertain world. Their research in the public sector revealed that policies that do not adapt to changing conditions run the risk of not achieving their purpose and can even impede the ability of sectors and communities to adapt to change. The book's foreword noted that "what at first sounded like solos on how to deal with such complex policy settings from disparate sectors—including business, transportation engineering, healthcare, natural resources and Internet communications, to name a few—became a symphony when the lessons learned from across this range of economic sectors were all heard together. A common thread in these lessons was an appreciation of the policy environment as a complex adaptive system, a conceptual understanding that illuminated many important characteristics of how people interact among each other and with their environment.

Furthermore, we live in a world where high levels of uncertainty require policy-makers not only to meet chosen strategic goals and implement planned policies, but also to respond to challenges as they arise, presently and in the future. This growing uncertainty in environment and development problems represents an additional challenge as commitments often need to be revised to reflect new knowledge, changing context or shifting priorities (Swanson et al., 2010). The challenge is to promote flexibility and establish adaptive mechanisms to enable policy-makers to adjust policies and actions to respond to emerging challenges and opportunities.

In this paper, we illustrate the common principles that link together the pursuits of sustainability, accountability and adaptability using case studies as examples. This is followed by our description of a new concept we refer to as *governAbilities* as the nexus of sustainability, accountability and adaptability and the tools to achieve them.

2.0 Common Principles for Sustainability, Accountability and Adaptability

There exists a set of common principles at the nexus of sustainability, accountability and adaptability. These common principles reveal a synergy among these pursuits that is critical to understand from the perspective of effective governance. The sections that follow consider each of these principles separately, followed by a synthesis of common principles at their nexus.

2.1 Principles of Sustainability

Sustainable development balances economic, social and environmental priorities to address the needs of the poor and account for the limits of social organization, technology and environmental systems (Brundtland Commission, 1987). Over the last two decades, governments have become more involved in developing national SDS, outlining their development pathways and choices in meeting the principles of sustainable development. When it comes to designing and implementing SDS, the literature explicitly recognizes the following core principles: addressing long-term perspectives and related uncertainties of sustainable development, ensuring both horizontal and vertical integration and engaging in effective participation (Meadowcroft, 2007; European Commission, 2004; Swanson et al., 2004; OECD, 2006; United Nations Economic Commission for Africa, 2011). Studies suggested that after an SDS is developed, another set of specific goals will need to be met, including identifying means of implementation, allocating financial resources, and monitoring, evaluating and reviewing the actions and effectiveness of the implementation process.

Overall, when promoting sustainable development at the local, regional and national levels, the long-term, *multi-generational perspective* is critical. However, this does not mean guiding society to a specific, clearly identified end state. Rather, it is an open-ended and ongoing process with characteristics that change over time, across space and location, and in different social, political and cultural contexts (Pisano et al., 2011). Thus a governance structure that aims to promote sustainable development needs to be able to "comply with the complexity and the indeterminacy of sustainable development as a steering objective" (Baker, 2009, p. 5). This is reflected in the definition of sustainable development from the 1987 Brundtland Report, "meeting the needs of the present generation without compromising the ability of future generations to meet their own needs." National strategies need a long time frame to implement concepts of intergenerational equity, a fundamental principle of sustainable development (OECD, 2006). However, incorporating long-term perspectives in the policy/strategy development process is challenging because the overall structure of departments, agencies and ministries may lack the capacity and mechanisms to facilitate long-term planning and address issues that cross departmental, jurisdictional and disciplinary boundaries (Steurer, Berger, & Hametner, 2010).

The pillars of sustainable development, economy, society and environment have implications for different sectors and are linked over long time horizons. For any strategy to be effective, it is crucial that it clearly articulates the overarching goals and priorities (and often targets) for each of the domains (UNEP, 2012; Rockström et al., 2009), specifying how it helps well-being and environmental quality in the area as a whole. It is also important that the goals and priorities are relevant over longer time horizons rather than simply addressing pressing needs. It is essential to target domains where "development patterns deviate furthest from sustainable development norms, and focus on filling the gaps in the coverage provided by already existing programs and institutions" (Meadowcroft, 2007, p. 9). Thus, in the context of

sustainable development, *horizontal policy integration* across a number of sectors and issues is necessary. Then, SDS are commonly understood "as balancing economic, social and environmental interests and policies in a way that trade-offs (or negative effects) between them are minimized and synergies (or win-win opportunities) maximized" (Steurer et al., 2010, p. 71). It is therefore critical that the SDS focus on specific sectoral goals that help translate broader sustainable development views and challenge current practices in sectors.

When defining sustainable development goals and priorities, processes must be developed to ensure stakeholders have opportunities to provide their views on the long-term sustainable development future/vision and how it should be achieved. They must also be informed about the progress of the sustainable development strategy's implementation. In general, *stakeholders' participation* is one of the key elements of design and review of SDS, including participation of experts, economic actors and civil society organizations, such as environmental non-governmental organizations (NGOs) (Zwirner, Berger, & Sedlacko, 2008; Pisano et al., 2011). Ensuring effective participation is becoming one of the key challenges in developing SDS, as very often participation tends to be ad-hoc and thus questions could arise about who was and was not included in these processes. Creating effective participation processes and managing them well is a key part of SDS (Zwirner, Berger, & Sedlacko, 2008). This requires moving beyond informative (and restricted) participation towards full participation with decisional influences, including changes in the strategy after the consultation, changes in programs and actions to implement the strategy, and access to outcomes of monitoring and evaluations.

For the successful implementation of policies, the cooperation of various political levels is crucial—that is to say, national, regional and local actors and diverse specialized agencies need to engage in a coordinated process (Berger & Steuer, 2006).[1] Therefore, governance and planning for sustainable development require steering activity that crosses functional and administrative boundaries and established territorial jurisdictions. Furthermore, numerous scholars emphasize that the challenges of *vertical coordination and integration* have increased in the last few decades (Berger & Steuer, 2006) at every level of policy-making. This underscores the importance of formally established institutions aimed to enhance the convergence of economic, social and environmental goals at every level of decision making. For example, at the global level, the principal policy-making institution is the UN Commission on Sustainable Development; at the regional level, the regional commissions have organized ministerial conferences and implementation meetings; at the national level, a number of institutional formats have emerged, such as national sustainable development councils or national SDS; at the local level, local processes have been developed by local institutions and municipalities (Pisano et al., 2011).

Lately, more attention has been devoted to the actual implementation of goals and actions outlined in an SDS, their effectiveness and the overall accountability of the developed strategies. Many scholars (for example, Swanson et al., 2004; UNECA, 2011; Gjoski, Sedlacko, & Berger, 2010) emphasize the importance of ensuring that powerful agencies with strong decision-making powers lead SDS development; financial resources are explicitly allocated to the actions presented in the strategies; and clear monitoring and evaluation procedures are outlined to increase accountability. Given this shift, recent views emphasize that to enable implementation and address uncertainties and trade-offs, adaptability and flexibility should be encouraged in institutional support and financial allocations.

[1] Also referred to as "multi-level governance."

2.2 Principles of Accountability

A government is accountable to the public for the policies and actions it puts into effect. In this context, measuring accountability entails measuring a government's responsibility for: (i) their performance, (ii) a transparent and representative decision making and (iii) outcome- and evidence-based policies and actions (van de Poel, 2011; Ospina, Diaz, & O'Sullivan, 2002; Romzek, 2002). We can easily identify linkages among these components because they all require the manager to perform their task to high standards as well as communicate with and respond to a variety of stakeholders. This approach to accountability requires managers to focus on the resources and funding available, the processes of their organization, and the outcomes of their programs and organization (Kearns, 1996). These outcomes must be justified, explained and even promoted in legal, political, sociocultural and economic environments (Ospina et al., 2002).

One of the key principles of accountability is *transparency*, making information about the processes accessible. This is closely linked to representation, which engages the right people (and engages them appropriately, without preferential treatment, etc.) and ensures mechanisms for steady and reliable information and communication between decision-makers and stakeholders (Held & Koenig-Archibugi, 2004, p. 126; cited in Drake, 2012). In recent years, public reporting has become a very popular accountability tool. There are many initiatives that focus on increasing transparency for diverse issues, including regional policy-making, in the private sector and civil society organizations. However, for public reporting to be useful, it is important to ensure that it meets the needs of citizens in holding their governments to account by including relevant information and making it accessible and understandable (Anderson & Findlay, 2010).

One aspect of accountability focuses on *measuring performance* rather than how *activities are structured*. A performance review of operations has typically been based on compliance with laws, rules and regulations, reflecting inputs and processes. Contemporary reforms seek to shift evaluations away from a rules-and-oversight approach toward a new emphasis on discretion and responsiveness (closely linked to seeing accountability as responsibility). The latter approach attempts to shift performance measures to also address output and outcome measures. In contrast to inputs and process orientations, a focus on outputs and outcomes emphasizes deliverables rather than executing the proper procedure (Romzek, 2000). Within this context, there has been a great deal of activity setting up output measures, such as the quantity and quality of services or products. Recently, there is more focus on reflecting on outcomes to assess if the *results* achieved by the outputs satisfy the client, taxpayer, customer or program needs. An outcome measure might gauge a change in the level of environmental pollution, the occurrence rates of a targeted disease or level of poverty in a given area (Ospina et al., 2002; Walker, 2002; Romzek, 2000).

In this view, decision-makers are responsible not only for direct outputs, but also for designing a reasonable approach to achieve outcomes—they need to be able to show how their proposed plans/policies/actions contribute to broader goals and priorities. In other words, they are expected to develop *evidence- and outcome-based management* frameworks that clearly delineate the anticipated outputs and outcomes. This should involve "*explaining their key strategies and long-term goals for creating value for public; communicating their specific short-term targets, explaining how they contribute to long-term goals, and securing acceptance and support for them; and identifying future events, decisions or circumstances that may significantly affect the prospects of the reporting unit or public it serves*" (Arnhold & Neumaier, 2008, emphasis added). Outlining the results framework and anticipated outcomes in advance is helpful not only for evaluating success after-the-fact, but also for learning, improvement and prevention of unfair evaluations.

Furthermore, accountability frameworks should provide a more integrated view of implementation, including forward-looking information. For example, since 1990 the U.S. Government Accountability Office (GAO) has made available guidance on prospective evaluation methods relating to "the likely outcomes of proposed programs, proposed legislation, the adequacy of proposed regulations, or top-priority problems" (U.S. GAO, 1990). Additionally, in 2012 the United Nations Economic and Social Council (ECOSOC) recommended that "national-level transparency on aid information must be sharply improved, but in ways which strengthen accountability" (ECOSOC, 2012, p. ii). To this end, they proposed the following means: "Ensuring that national aid information management systems track effective development cooperation *targets*; Making national aid information management systems more *accessible* to non-state actors; Making a *wider range of information* (especially on disbursements, *forecasts*, progress on results, and gender issues) available for accountability purposes; Encourage a wider range of providers to submit complete, timely and *forward-looking* data on development cooperation and its results at national level" (p. ii; emphasis added).

2.3 Principles of Adaptability

Addressing complex anticipated and unanticipated challenges in policy-making is becoming a necessity, for example, in the context of climate change impacts, market changes and technological development. Some of the first discussion of adaptability in policy-making appeared in the early 1900s when Dewey (1927) proposed that "policies be treated as experiments, with the aim of promoting *continuous learning and adaptation* in response to experience over time" (quoted in Busenburg, 2001). This line of thinking was popularized almost a century later when Lee (1993) introduced the "adaptive policy" terminology to the literature in his account of ecosystem management in the Columbia River Basin in the U.S. Pacific Northwest, building on the adaptive management concepts of Holling (1978). Presently, many sectors of society are increasingly pursuing a more sophisticated approach to policy design and implementation to prepare for potential dynamic consequences of the interactions and interconnectedness among different systems (Swanson & Bhadwal, 2009).

In policy-making, it is important to understand what makes policies adaptive to challenges and translate this knowledge into policy design. There are currently policies that identify their key features and build them into future policy development. Some examples include: responding to changes over time and making explicit provisions for learning (Walker & Marchau, 2003); introducing small-scale interventions for the same problem, offering greater hope of finding effective solutions; evaluating performance of potential solutions and selecting the best candidates for further support and development (Glouberman et al., 2006); and ensuring that social capital remains intact (Ruitenbeek & Cartier, 2001). Swanson and Bhadwal (2009) triangulated these features cited in the literature with case studies of policies that have worked well under dynamic conditions and identified the following guidelines for creating adaptive policies: using integrated and forward-looking analysis to anticipate the future; using multistakeholder deliberation to leverage multiple perspectives for problem solving; leveraging the self-organizing capacity of communities; decentralizing decision making to the lowest and most effective jurisdictional level; and promoting continuous improvement through formal policy reviews and adjustments.

The ability of stakeholders to respond to unanticipated events in innovative ways is strengthened by ensuring that policies do not undermine existing social capital, creating forums that *enable social networking*, facilitating the sharing of good practices and removing barriers to *self-organization* (Roy, Nair, & Venema, 2009). Effective implementation of policies requires social capital to create social networks, which contributes to the governance by building well-established institutions (Brown, 2007). These networks facilitate the pooling of knowledge, concerns and efforts

toward a common cause. Roy, Nair and Venema (2009) concluded that supportive policy mechanisms for promoting self-organization and social capital building have the following key characteristics: *creating and promoting effective spaces and issues for adaptive cooperation* (Axelrod & Cohen, 2000); *facilitating copying through promotion of best practices and enhancing leadership* (Axelrod & Cohen, 2000); and *removing resource barriers to self-organization* (Koontz, 2006).

2.4 Principles at the Nexus

From the above analysis there is a clear set of overlapping principles at the nexus of sustainability, accountability and adaptability. As illustrated in Table 1, these common principles are that governance be:

- Outcome-based
- Multistakeholder
- Forward-looking
- Multi-dimensional

Outcome-based. Outcome-based planning and reporting is at the core of sustainability, accountability and adaptability pursuits. From the sustainability perspective, this principle is critical in that it represents the interface between science (physical, social and economic) and policy. Scientists research, discuss and present findings related to various critical thresholds that are important to society and the environment. These thresholds then provide the basis for the political discourse to set targets that are either voluntary or legally binding. Whether it involves carcinogens that can enter our food products or greenhouse gas emissions and climate change, scientists bring concerning issues to the fore and they eventually enter the public policy realm where standards or targets are established to guide development. Substantive change for any economic, social or environmental issue demands some absolute sense for what is the desired state, what is achievable and by when.

From an accountability perspective, the results-based management evolution that has occurred in governments and business over the past two decades is a testament to the fact that planning today demands specific, measureable, achievable, relevant and time-bound objectives if substantive change is sought and if we are to be accountable to it. While the setting of outcome-based targets by no means ensures that they will be achieved, it does lay the foundation for assessing progress and thereby the means to evaluate accountability to commitments made. It follows from this notion that from an adaptability perspective, outcome-based planning and reporting provides the frame of reference through which improvements to performance and important adaptations to implementation approaches can be made to help ensure continued progress.

All the analyzed approaches emphasize the importance of setting goals and priorities that help society achieve a desired sustainable pathway and, at the same time, create governance structures to effectively implement such a pathway. It seems that sustainability and accountability have strong connections through outcome-based monitoring, ensuring that goals are implemented. While such linkages may indicate a level of rigidness, it is also emphasized that the governance structures must be flexible to allow continued leaning and have the ability to change decisions if the expected outcomes are achieved and/or unexpected challenges arise.

Multistakeholder. This principle was important to sustainability, accountability and adaptability, but each for slightly different reasons. From an accountability perspective, stakeholder participation in policy design and implementation is important to provide transparency to the process—so that citizens can know and trust what government is doing. This is also true from a sustainability perspective, but more important to achieving sustainability is the broad perspective

that stakeholder participation provides the problem-solving process. Horizontal policy issues are messy and complex, and as such, no one epistemic group has the requisite knowledge to successfully plot and plan the way forward on policy. Sustainable development requires that a diverse array of perspectives are brought to the table so that the right range of questions are asked early on and potential strategies are laid out and triggered at the appropriate time. The relevance of multistakeholder involvement to adaptability is again somewhat different. From both policy experience and the wide literature on effective intervention in complex adaptive systems, we learn that leveraging the self-organizing potential of citizens is crucial for adapting to unanticipated events. This can only be done if stakeholders are able to communicate with each other and interact to share knowledge and experience gained. This positions stakeholders to respond to events in ways that were not envisaged at any point in the policy process. And as with sustainability, the involvement of multiple stakeholders better enables problem solving, but in the context of adaptability, this deals with decisions relating to policy improvement or the abandonment of the current course of action.

To ensure that diverse perspectives are addressed, *stakeholders' inputs* are crucial. The analyzed areas highlighted the importance of *participation* and *representation* by involving stakeholders in discussions about sustainability, building on their experiences and capacities to increase adaptability of policies and actions options, and providing on-time and relevant information about processes already implemented to ensure evidence-based inputs and feedback. Stakeholders' involvement and ensuring proper representation included not only their participation in planning but also their collaboration during implementation. Thus, the building of social capital increases their capacities to respond to challenges.

TABLE 1. SYNTHESIS OF SUSTAINABILITY, ACCOUNTABILITY AND ADAPTABILITY PRINCIPLES IDENTIFIED FROM THE LITERATURE.

CORE GOVERNANCE DEMANDS	KEYWORDS OF GUIDING PRINCIPLES IDENTIFIED FROM THE LITERATURE	PRINCIPLES AT THE NEXUS
Sustainability	• balances economic, social and environmental goals • effective participation • future generations • needs of the present • planetary boundaries	• Outcome-based • Forward-looking • Multistakeholder • Multi-dimensional
Accountability	• transparent and representative • outcome- and evidence-based policies, actions and management • performance • specific short-term targets • securing acceptance and support • identifying future events, decisions or circumstances that may significantly affect the prospects • accessible • wider range of information • forward-looking	
Adaptability	• continuous learning and adaptation • evaluating performance • ensuring that social capital remains intact • self-organization	

Forward-looking. A prospective view is essential for the collective pursuit of sustainability, accountability and adaptability. Development that can meet the needs of the present, while not compromising the ability of future generations to meet their own needs—the standard definition of sustainable development—demands a prospective view for planning and implementation. And this is a multi-generational view, not just a few years or decades. The types of societal transformations necessary to achieve low- and no-emissions energy sources, increase clean water availability and efficient use, reduce poverty globally and improve mortality rates for the world's poor, to name just a few critical sustainability issues, require a long view that can anticipate as much as possible the roadblocks and barriers that can upset progress along the way. They must also anticipate the opportunities that might arise so as to be able to adapt and take advantage of them.

From an accountability perspective, an assessment of risk that only captures the current issues landscape is inadequate for managing investments in things like infrastructure and large-scale government programming. Medium and long views are again necessary for planning and reporting to the public, and for adapting to change so that risks can be mitigated and opportunities leveraged in a timely manner.

Multi-dimensional. We see from a view of sustainability, accountability and adaptability that multi-dimensionality, from both issues and scale perspectives, is a key cross-cutting principle. For sustainability, the integration and balancing of progress among economic, social and environmental issues is of primary concern. Additionally, the complex and adaptive nature of the systems that are at play necessitates that solutions be conceived and implemented through collaboration at multiple levels of governance. In particular, when implementing cross-sectoral, multi-dimensional strategies, the importance of vertical coordination and collaboration across different levels of governance is crucial for addressing sustainability and promoting adaptability.

We also observe from a review of accountability principles that a wider range of information is desired in all information categories including disbursements, forecasts, progress on results and gender issues. This make sense—if the sustainability issues are multi-dimensional then being accountable for decisions and actions undertaken to advance sustainability must also leverage a commensurate array of information.

The importance of multi-dimensionality for timely adaptation follows a similar line of thinking. A wide range of information on key indicators is necessary to help trigger reviews and mitigating actions. And some redundancy in support services across different levels of government is a good risk management approach when intervening in complex adaptive systems where surprises are more the norm than the exception. This is particularly important in disaster and emergency response where one level of government could become completely overwhelmed with immediate and priority issues. Also, the self-organizing potential of stakeholders is a critical element for good adaptability and this is facilitated when stakeholders across issue domains are networked and connected. For example, having representation in a scenario-planning exercise from across an organization helps build internal social capital that can be leveraged in times of crisis—things go much smoother amidst the chaos when key personnel know what each other can do and how to get in contact.

3.0 Tools At The Nexus of Sustainability, Accountability and Adaptability

The previous section discussed three core governance abilities in sustainability, accountability and adaptability and identified common principles at their nexus. In this section, we present specific approaches and tools that are being used by governments to help achieve sustainability, accountability and adaptability. These approaches and tools, presented below, are organized under the common outcome-based, forward-looking and multistakeholder principles. We provide examples from a number of countries and sectors to show how the principles and tools can be operationalized in diverse contexts.

3.1 Outcome-Based Planning and Reporting Tools

In this subsection we feature two prominent outcome-based planning and reporting tools that can help advance sustainability, accountability and adaptability in government. First, Budgeting for Outcomes is an approach that was championed by Washington state in 2002; since then, it has been applied to over 20 states, counties and cities across America. The second tool is the Indicator Information System, which has seen research, development and implementation at all levels of government and around the world over the past two decades of the Internet age.

Budgeting for Outcomes (BFO) represents a new way of doing things in the age of fiscal crisis, compared to the age-old practice of budget trimming. Rather than the traditional budgeting process (see Box 1), it begins by asking what citizens want and focuses on creating the most value for costs (Arnhold & Neumaier, 2008).

In the midst of a fiscal crisis, the State of Washington had had enough of this traditional process and knew instinctively that they were not asking the right questions. The state government then enlisted the help of the Public Strategies Group to devise a new way forward. The result was the BFO approach, turning the traditional process on its head and asking first what results the citizens wanted, and not the programs the agencies funded (Osborne& Moore, 2010). A process was devised that addressed five fundamental questions: "(i) How much of the problem was short term, and how much was long term? (ii) How much are citizens willing to spend on state government? (iii) What results to citizens want for their money? (iv) How much will the state spend to produce each of these results? And (v) How can money best be spent to achieve these results?" (Osborne & Moore, 2010). To address these questions, the BFO process was created, consisting of 10 steps, which are presented in Appendix 1.

BOX 1: TRADITIONAL BUDGETING PROBLEMS

Osborne and Moore (2010) describe the traditional government budget game as this:

> *"...the budget office sends out its annual budget instructions. Every department responds by proposing to spend what it spent last year – or more. Invariably departments propose additions to cover inflation, any caseload increase they expect, or any new mandates they have received. The new total is called 'the base', and any new cuts are made from this inflated number. In times like these, most managers know their budgets will be cut, so the smart ones build in enough padding so that their programs can perform, even after the trimming. In a huge game of hide-and-seek, a small army of budget analysts comb through their submissions, looking for the padding. The process absorbs enormous energy, under the reigning assumption that no one is telling the truth."*

In the wake of the implementation of the BFO process by then governor Gary Locke, a local city newspaper commented that "Few Washingtonians will find little to like about the brutal state spending plan Gov. Locke recommended Tuesday.

But as ugly as the result was, there's a lot to like about the way the Gov. Locke and his staff arrived at it, using a new process that forced hard choices about the priorities of state government" (quoted in Osborne and Moore, 2010). Governor Locke won 64 per cent of the vote in the next state elections, and government itself liked the process, with the senate noting that "With the budget framed around ten desired results, and all activities listed in order of importance, including those that would be eliminated, legislators found the documents very clear" (Osborne & Moore, 2010).

We turn the discussion now to a different, yet related tool: **Indicator Information Systems** (IIFs). This tool has a similar foundation to BFO: to identify what is most important to citizens and measure the status and trends of these issues over time. In some applications, IIFs operate at the periphery of the actual government planning and budgeting, informing the process; in other applications, it is a tool of the process itself for results-based management. The potential congruencies with the BFO process will be obvious from the case examples presented below—the majority of things that citizens want tracked are high-level outcomes, the same type of outcomes that are used to initiate the BFO process in government.

Indicators and indicator systems have proliferated over the past 15 years, largely a combined result of the results-based management push in the public and private sectors, the UN-led sustainable development movement at the national level, and the community quality-of-life or well-being movement at the local level. The Internet has certainly played a key role in this surge in the use of indicators owing to the ease to which information could be shared among organizations and the public. These IIFs are the essential evidence base for outcome-based planning and reporting. Featured in the paragraphs that follow are examples of such systems at the federal, state, local and business levels.

Consider first Germany as a federal illustration. By order of the federal government, starting in 2006 Germany's Federal Statistical Office reports every two years on progress toward sustainable development (Federal Statistical Office of Germany, 2012). The plan for progress is outlined in the German Sustainability Strategy, which was first tabled in 2002 and has since been revised in 2004 and 2008 through a public progress reporting process. Additionally, a peer review process is used to provide further input into the strategies evolution. The first peer review was undertaken in 2009 and the second one is currently underway.

The architecture of the semi-annual indicator report of the Statistical Office covers four themes and 22 sub-themes. The themes are: intergenerational equity, quality of life, social cohesion and international responsibility. Each sub-theme is represented by at least one indicator, with the system comprising 38 indicators in total. The semi-annual statistical progress reports provide a good illustration of the anatomy of a good indicator for outcome-based planning and reporting. Figure 1 presents Germany's innovation indicator as a measure of intergenerational equity. The essential components of a good indicator information system include: (i) a title—innovation in this example; (ii) indicator definition—percentage of public spending on research and development; (iii) units of measure—spending as a percentage of gross domestic product; (iv) goal —with a note that it is based on the Europe 2020 strategy; (v) an assessment of progress against goal—done in this instance using a four-point scale of sunny, partly cloudy, cloudy, and stormy; (v) comparison to other jurisdictions; (vi) source of data —in this instance it is the OECD.

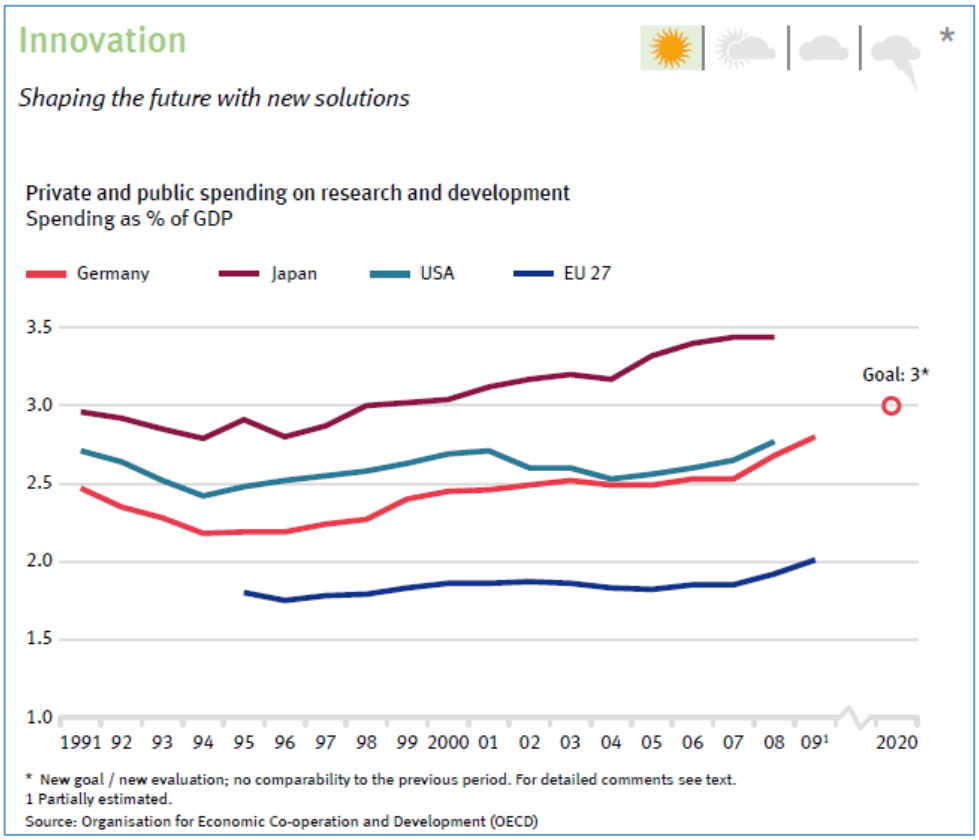

FIGURE 1. EXAMPLE INDICATOR FROM GERMANY'S *PROGRESS REPORT ON SUSTAINABLE DEVELOPMENT*, ILLUSTRATING THE ANATOMY OF A GOOD INDICATOR INFORMATION SYSTEM

Source: Federal Statistical Office of Germany (2012)

This practice of reporting on progress is also widespread at the subnational level. Consider the example of the Canadian Province of Alberta which has a longstanding practice of outcome-based budgeting and reporting going back to 1993. *Measuring Up* is the government's annual performance report and, with its 2013 iteration, is a requirement of Government Accountability Act and prepared under the direction of the Deputy Minister of Treasury Board and Finance. The report is released every June and must include a comparison of actual progress toward targets set forth in the government's three-year strategic plans, with variances explained. The *Measuring Up* report is reviewed by the Audit Committee established under the Auditor General Act. The current iteration of *Measuring Up* introduces Results-based Budgeting (RBB) as required in the Results-based Budgeting Act which became law in 2012. The RBB system "prioritizes the allocation of government resources to ensure the relevant programmes and services are meeting their intended outcomes; and, are being delivered in the most effective and efficient way possible" (Government of Alberta, 2013a and 2013b). RBB builds on several years of practice related to outcome-based budgeting by the Alberta government.[2] Appendix 2 provides an illustration in which forecasted and actual expenditures for the 2012–15 strategic plan priority areas by key departments are reported on an annual basis.

[2] The new RBB system, along with the continued publishing of the whole-of-government *Measuring Up* report, is noteworthy in relation to continuous improvement in public administration and accountability, particularly in light of other longstanding subnational best practices that have been discontinued in recent years; the states of Oregon in the United States and Tasmania in Australia are two such examples.

Perhaps some of the most innovative efforts for outcome-based planning and reporting are occurring at the community level, and in the United States in particular. The Jacksonville Community Council Inc. (JCCI) in the state of Florida is one of the longest-running examples of the use of community indicators for envisioning and tracking progress for quality of life. JCCI sees community change as a process that evolves with an evidence base at its foundation to inform continuous evaluation, study, implementation and outcomes (Figure 3). Since their inception in 1985, JCCI has released 28 community quality-of-life reports to help inform and catalyze community action.

FIGURE 2. THE JACKSONVILLE COMMUNITY COUNCIL INC.'S MODEL OF COMMUNITY CHANGE
Source: JCCI (2013d)

The JCCI Community Snapshot mapping tool enables citizens to view data and trends for an array of statistics under 10 themes and compare them to counties across the state using maps and time series charts. The 10 community quality-of-life themes include (JCCI, 2013b):

- Population demographics
- Achieving educational excellence
- Growing a vibrant economy
- Preserving the natural environment
- Promoting social well-being and harmony
- Enjoying arts, culture and recreation
- Sustaining a healthy community
- Maintaining a responsive government
- Moving around efficiently and safely
- Keeping the community safe

Like the federal and state-level examples shown previously, JCCI's indicator information system includes the core pieces of information, except for information about targets. The role of the JCCI community quality-of-life indicator information system is well understood and appreciated in the state. An example quality of life summary report is presented in Appendix 3 for key governance indicators in one county.

BOX 2: PRAISE FOR THE JACKSONVILLE COMMUNITY COUNCIL INC'S MODEL

The *Florida Times* recently noted that "In some ways, the best news for Jacksonville is the [Quality of Life Progress] Report itself. The very premise of the report, and of JCCI, is the belief in Jacksonville as a community where the problems of some are the responsibility of everyone" (JCCI, 2013c). And the critical role of such community information systems is also well documented by the U.S. federal government. The U.S. GAO (2011) concluded that community indicators are "a vehicle for encouraging civic engagement both through the system's development process and through action once the indicator system is in place." The GAO also noted that such systems "help address community or national challenges by facilitating collaboration of various parties inside and outside of government" and "provide solutions to long-term challenges."

The technology and process for implementing indicator information systems continues to advance through the leadership of community organizations such as the United Way. In the Canadian City of Winnipeg, the local United Way office and the International Institute for Sustainable Development have championed a state-of-the-art community indicator information system called Peg, which is designed to provide community planners and citizens easy access to key knowledge of progress toward well-being and to catalyze collaboration among government, business and civil society (Peg, 2013).

As a final example of an indicator information system, consider the case of the U.S. State of Oregon and its Oregon Progress Board and Benchmarks system circa 2009 (Government of Oregon, 2009). In a 2004 paper to the OECD World Forum on Key Indicators, the executive director of the Oregon Progress Board reported the following summary (Tyrens, 2004):

> In May 1989 Oregon's then Governor Neil Goldschmidt unveiled Oregon Shines: An Economic Strategy for the Pacific Century, a strategic vision that recommended a series of initiatives meant to transform the state's economy to meet the challenges of the twenty-first century. The vision was a holistic one that considered social and environmental health vital contributors to a healthy economy. In 1989, the state legislature created the Oregon Progress Board to identify and monitor a set of indicators, called Oregon Benchmarks, designed to track progress toward achieving the Oregon Shines' vision.
>
> Since then the Board has issued biennial reports on the state's progress toward the goals. Unlike public-sector performance systems in other states and localities, Oregon's system has not assigned responsibility for meeting specific targets to any state agency. The benchmarks and the vision they embody are theoretically the responsibility of all Oregonians.
>
> Chaired by the governor, the Progress Board is made up of business, community and political leaders intended to represent the ethnic, cultural, social and economic diversity of the people of the state. The Board has little statutory authority over state agencies and none over other sectors of society. As respected leaders of the community, the Board's influence comes primarily from its association with the governor and other members' standing in their respective communities.

> Engaging civil society in the Oregon Shines planning process has been a key ingredient since its inception. In its third biennial report, the Board declared "Never before has a state brought together so many public, private and non-profit organizations to pursue a shared vision and measure progress toward that vision."

While the Oregon state government ceased funding the Oregon Progress Board and its Benchmark system in 2009 (Government of Oregon, 2013) after two decades of service to the citizens of Oregon, it still stands today as one of the most cited and celebrated outcome-based planning and reporting systems in the U.S. and internationally.

3.2 Multistakeholder Engagement and Deliberation Tools

The development and implementation of tools for multistakeholder engagement and deliberation is a well-travelled road. The journey by governments at all levels is ongoing, with many lessons being learned about effective and meaningful interaction among governments, businesses and civil society.

One particular tool that is being advanced is the **Formal Multi-Stakeholder Council**, seen most typically in relation to advancing sustainable development at the national level, but certainly not limited to this level of governance.

The German Council for Sustainable Development (RNE) is one of the best good-practice examples in this regard and serves to bring a variety of stakeholders together to have retrospective and forward-looking discussions about future development in the country. The RNE was formed in 2001 and is described as "an advisory body mandated by and reporting back to the German Federal Government" (RNE, 2013). There are 15 council members who are given three-year terms by the Chancellor. The RNE (2013) "advises the government on its sustainable development policy and, by presenting proposals for targets and indicators, seeks to advance the Sustainability Strategy as well as propose projects for its realization." Additionally, the RNE (2013) is expected to "foster social dialogue on the issue of sustainability" and "increase the level of awareness among all concerned and the population as to what sustainable development actually means by demonstrating the consequences of social action and discussing possible solutions."[3]

As of 2008 there were approximately 100 multistakeholder councils operating around the world—some purely government, some purely civil society and others multistakeholder—and spanning all levels of governance (Antonio 2011). According to Antonio (2011), multistakeholder councils are beneficial as: mechanisms for integration and coordination; means for cooperative action and forging commitment; voices/advocates of sustainability; venues for resolving intersectoral issues/conflicts; vehicles for education, information dissemination and awareness raising; and mechanisms for formulating, monitoring and assessing the implementation of national SDS.

Niestroy (2012) takes stock of the experience of sustainable development councils at the national and subnational levels and notes that there are examples of successful sustainable development councils, with respect to all their functions of advising government and raising awareness about sustainable development. Sustainable development circles in Europe clearly acknowledge cultural and political diversity. But Niestroy goes on to remind practitioners that "sustainable development councils are not a panacea. They are a good and simple model for some kind of structured approach for civil society involvement in policy development and monitoring. There are, and should be, other, and more legally binding mechanisms for participation, as foreseen in 'Strategic Environmental Assessment' or other 'Impact

[3] The German Council is supported by a Secretary General and a secretariat to help its appointed members carry out the mandate. Among the council's many activities are hosting conferences and youth dialogues, coordinating peer reviews of the national sustainable development strategy, advising on policies such as energy efficiency and coordinating the development of awareness tools such as the German Sustainability Code for business.

Assessment' attempts. A sustainable development council is more of an advisory body, which works in conjunction with its respective country/government to monitor sustainable development strategies."

While there are many examples of successful multistakeholder councils, there are also cases where such councils have not stood the test of time. The United Kingdom's Sustainable Development Commission and Canada's National Round Table for Environment and Sustainable Development are two such examples at the federal level. In both instances financial considerations were cited among the main reasons for their discontinuation, along with the less publicized sentiment that their governments no longer saw them as relevant in the current political discourse. At the subnational level, the Tasmania Progress Board was recently dismantled with government calling it a move toward greater efficiency and fiscal restraint and some in civil society calling it the "death of accountability" (Niestroy et al., 2013). The Tasmania Together community planning initiative, along with its independent and multistakeholder Progress Board, was an internationally recognized best practice in community planning and accountability, so the announcement by the state's government that the Tasmania Together Progress Board Act of 2001 was to be repealed was a shock to many (Williams, Niestroy, Diebold, & Esche, 2013). The Oregon Progress Board in the U.S., the system used as a model for the Tasmania Together Process, unfortunately suffered a similar fate a few years earlier. The Oregon Progress board and the state's Oregon Shines participatory strategic planning and reporting process were also internationally recognized best practices that operated and served Oregon successfully for over two decades.

The U.K.-based Stakeholder Forum has recently initiated a Global Network of National Councils for Sustainable Development with the aim to "to strengthen and enhance the work of the highest level sustainable development bodies at the national level" and to provide "information on the form and function of the numerous NCSDs across the world, as well as providing a space for these bodies to exchange experiences, ideas and discuss ways to cooperate" (Stakeholder Forum, 2013). This will be an important source of information and forum for dialogue on how to improve the effectiveness and efficiency of this crucial tool for collectively advancing sustainability, accountability and adaptability.

3.3 Forward-Looking Approaches and Tools

The ability to gain a forward perspective to inform strategic planning processes is an established practice in government with a variety of tools being applied over the years. Tools such as environmental scanning and Strengths, Weaknesses, Opportunities and Threats (SWOT) analyses are among the most common approaches for identifying a wider variety of driving forces and factors affecting the potential to succeed. These types of approaches are robust for increasing peripheral vision on issues, and can help provide a forward-looking perspective if questions about the future evolution of key drivers are brought up in the process. Other planning tools, such as **Scenario Planning**, provide a more direct means to couple integrated and forward-looking analysis into one process. Case examples are provided below.

Popularized by Royal Dutch Shell in the 1970s, scenarios have been described as "frameworks for structuring executives' perceptions about alternative future environments in which their decisions might play out" (Ralston & Wilson, 2006). Scenario planning has emerged as a method particularly well suited to taking a long-term view and to attempting to harmonize diverse goals in the socioeconomic and environmental realms (Raskin et al., 1998). The outcomes of scenario planning can be used for multiple purposes, ultimately providing better policy or decision support and stimulating engagement in the process of change. They can provide valuable insights about different plausible futures and an overall context to test planned policies and actions for their robustness, effectiveness and relevance over time.

In the late 1960s and 1970s Royal Dutch Shell pioneered the corporate application of scenario analysis and planning. By using stories of the future to examine surface assumptions about business and political forces of the present, Shell gained a unique source of competitive advantage in the oil industry. At Shell, the scenario-planning process helped managers to "clarify their assumptions, discover internal contradictions in those assumptions, and think through new strategies based on new assumptions" (Senge, 1990).

From a federal perspective, in 2010 the RNE launched the Visions 2050 project to help identify a shared vision and guiding principles for the future, a recommendation stemming from the 2009 peer review of Germany's National Sustainability Strategy. The Visions 2050 project was launched by the RNE in 2010 and gathered 33 "societal players" to write down their vision of life in Germany in 2050. These were people who by 2050 "will still be occupied very much with their professional careers, will go on pension, will found families, will be involved with their communities and in politics…people who will shape the political culture of the next several decades" (Bachman & Engelke, 2013). The array of future scenarios that were submitted included titles such as Vocabulary 2050; Sustainable Regional Economy; Auto-mobility; Global Change in Thinking; The Only Thing that is Certain is Uncertainty; Global Utopia; and Berlin Star Date 2050. These visions provided input to the RNE's follow-up effort, the Dialoge_Zukunft_Vision2050 project, in which persons under the age of 27 were nominated to participate in an online and face-to-face dialogue about a sustainable future for Germany.

BOX 3: THE BENEFITS OF SCENARIO ANALYSIS AND PLANNING

Scenario analysis and planning has a proven track record of implementation over the past 40 years. The approach is noted for providing decision-makers with (from Ralston & Wilson, 2006):

- A means for linking contradictory information
- Understanding of the dynamics of change
- Providing clues to the timing of key moments of change
- Identifying a fuller range of opportunities and threats
- Transparency of decision making
- A thorough assessment of risks
- A sound basis for continuous monitoring of the environment
- The creation of strategies that exhibit a greater degree of resilience and flexibility

In 2012 the Commission on the Future of Sweden was established by the Swedish government and chaired by the prime minister. Their aim was "identify future societal challenges the country may face, which in turn will give a foundation for the Swedish Government to prepare long-term strategies and policies" (Shift, 2013). The commission brought together a collection of Swedish organizations to create a set of scenarios about the future green economy in Sweden and test "how different policy measures might work in relation to global trends" (Stockholm Environmental Institute, 2013). The organizations included the Stockholm Environment Institute, the Swedish Defence Research Agency, the Swedish Confederation for Professional Employees and the Swedish Agency for Growth Policy Analysis. The final report of the effort, entitled *Sweden in a World of Growing Uncertainties*, concluded that "uncertainty is an essential component in economic policy making if we are to preserve prosperity, security and competitiveness" (Stockholm Environment Institute, 2013). A scenario-planning process was employed "to peer into the future without trying to predict it, and can

help generate viable and robust policy options without specifying them in advance" (Stockholm Environment Institute, 2013).[4]

In the United States, the Federal Highway Administration (U.S. FHWA) uses scenario planning as an analytical tool for transportation professionals to gain a better understanding of potential challenges and then adjust strategies, policies and internal planning procedures. The scenario-planning approach, generally speaking, provides a structured framework for analyzing various forces that contribute significantly to future development and for creating shared visions.[5]

Any exercise designed to think about the future can be roughly generalized in three parts: (i) foresight; (ii) insight; and (iii) action (Institute for the Future, 2013). The general steps involved in a participatory scenario-planning exercise are for the most part quite consistent across the literature and can be parsed into the general phases of foresight to insight to action. There is, however, some variation in implementation depending on the purpose of the exercise. For example, the steps will vary somewhat if the exercise is meant to illuminate vulnerabilities of an existing strategy or plan (stress testing), versus if the exercise is meant to explore plausible futures that might unfold to provide context for policy recommendations (scenario analysis), or to develop a vision of the future and backcast a plan for getting there (visioning). In practice, there is often a little of each of purpose imbedded in any exercise.

TABLE 2. THE GENERAL STEPS OF SCENARIO PLANNING AND MODES OF APPLICATION

PHASES	STRESS TESTING (ADAPTATION)	SCENARIO ANALYSIS (FORECASTING)	VISIONING (BACKCASTING)
Foresight	Identify the plan or strategy and clarify the focus question and indicators of success	Clarify the focus question and indicators of success	Clarify the focus question and indicators of success
	Identify key drivers of change and critical uncertainties	Identify key drivers of change and critical uncertainties	Identify key drivers of change and critical uncertainties
	Develop array of plausible scenarios	Develop array of plausible scenarios	Develop a desired vision of the future
Insight	Assess vulnerabilities and opportunities	Address the focus question in the context of the plausible scenarios	Identify a plan of action that can achieve the desired future
	Identify adaptive actions	Identify recommendations	Perform a stress test (column 1) of the plan of action
Action	Implement adaptive actions	Outreach and communication	Implement plan of action
	Monitoring, adaptation and continuous improvement	Monitoring and scenario updating	Monitoring, adaptation and continuous improvement

[4] Two core challenges were highlighted, including degraded ecosystems and increasing pressure on natural resources. The report noted that "these have a negative impact on global prosperity and the stability of the international financial system" (Stockholm Environment Institute, 2013).

[5] The FHWA suggests applying scenario planning to a state-wide or metropolitan level to test different alternatives that meet future needs of the state and community. The administration emphasizes the role of participation in successful public sector scenario planning to "educate about growth trends and trade-offs, and incorporating stakeholders' values and feedback into future plans" (U.S. FHWA, 2013). For example, the Northeastern Illinois Planning Commission applied the scenario-planning approach in their 2040 Regional Framework Plan. This plan was supported by an extensive public-involvement process that included 200 workshops, in which 4,000 participants expressed their vision of how the region should address growth through the year 2040 (NICP, 2013).

These general steps of scenario planning are summarized in Table 2, along with its various modes of application. Application of these various scenario-planning steps to provide forward-looking perspective is directly obvious and intuitive. In relation to outcome-based planning and reporting, identifying high-level indicators of success (i.e., information that signals what aspects of each plausible future might be unfolding) is an important entry point in the scenario-planning process, as is developing System Indicators that can be used to trigger adaptations and Key Progress Indicators to manage continuous improvement. With regard to multistakeholder engagement and deliberation, scenario planning is best undertaken with a group of persons that can provide multiple perspectives on key drivers of change, the plausible evolution of these drivers, and key actions and monitoring indicators. The scenario planning approach is designed specifically to address the horizontality of issues, and with the participation of multiple levels of government, it can also be used to help achieve better vertical integration.

In their review of the practice of scenario planning at Royal Dutch Shell, Wilkinson and Kupers (2013) make a very cogent summary observation about the approach that reveals its potential to help advance the collective pursuit of sustainability, accountability and adaptability by building social capital within and beyond the organizations. This potential can aid in navigating complexity and conflict—managing disagreement while avoiding the extremes of groupthink and fragmentation. They go on to describe the continued and increased application of the approach in business, noting that researchers at Bain reported in 2007 that the firm's regular survey of management tools showed a sustained increase in the use of scenario planning after 9/11; in the most recent survey it was reported that 65 per cent of companies expected to use scenario planning in 2011 (Wilkinson & Kupers 2013).

3.4 Multi-Dimensional Approaches and Tools

The integration and coordination of efforts across governance levels, be they horizontal, vertical or temporal in nature, was observed as critical for the collective pursuit of sustainability, accountability and adaptability. With regard to vertical integration, one important approach and tool that has emerged is the **sustainable development strategy**. Introduced at the first Earth Summit in 1992 in the form of the *National Strategy for Sustainable Development* and the *Local Agenda 21*, these integrated planning frameworks and processes have stood the test of time and have proven to be a successful tool for advancing sustainability planning at all levels of government, particularly for countries that do not have a national development plan or planning process. Austria and Spain's Basque country are two interesting cases to elaborate in this regard.

In the first example, Austria is the only country in Europe that has adopted a national strategy for sustainable development that is binding at both the national and the regional levels, aligning federal and state SDS to improve leveraging (European Sustainable Development Network, 2012b). Over the years, Austria has worked toward becoming an example of vertical and horizontal integration, transparent coordination and enabling of citizens' participation.

In addition to its binding nature, vertical coordination is achieved through a number of mechanisms including the Actors Network Sustainable Austria. This network is intended to facilitate networking among sustainable development coordinators from the national, regional and local levels (ESDN, 2012b). In order to exchange experience on sustainable development issues, a network journal is published and regular network meetings are held. Horizontal coordination on the federal level is fostered by the Committee for a Sustainable Austria, which consists of representatives of all federal ministries, social partners and the chairs of the Expert Conference of National and Regional SD Coordinators.

Austria's original national strategy for sustainable development was created a decade ago and has gone through four reviews with improvements and expansions, including developing a common framework for both federal and regional sustainable development and providing appropriate institutional mechanisms. The country's current strategy, ÖSTRAT, was created in 2010 and is coordinated by the Expert Conference of National and Regional SD Coordinators, chaired by Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) and the Federal Chancellery together with representatives of regional sustainable development coordinators (Government of Austria, 2012; ESDN, 2012a). The strategy was developed through multistakeholder forums and committees. There is a comprehensive and well-updated Austrian Sustainability Portal where reports with measurable and visible progress achieved are published. For the overall assessment of sustainable development in Austria, sustainable development indicators were developed and revised through a broad dialogue process including all target groups.

Spain's Basque Country is another interesting example of vertical and horizontal integration as evidenced by this region's sustainability vision and strategy (EcoEuskadi 2020) and its Local Agenda 21 network.[6] Vertical integration upward and horizontal integration across issues are achieved in part via the strategy's "Control Panel," which includes a complete system of signs to indicate variations in the truly relevant magnitudes. The Control Panel includes three types of indicators with different characteristics: (i) headline indicators, aligned with the objectives included in the Europe 2020 Strategy; (ii) policy monitoring indicators, focusing on the direction of change, which are directly related with the strategic objectives established; (iii) strategy management progress indicators, including a panel of internal control indicators that reflect the strategy's level of progress. The Local Agenda 21 network has been instrumental to the success of this initiative (see Box 4).

Several countries with national development planning processes in place, including Bhutan, Costa Rica, Brazil, Ecuador, China, India and Ghana, for example, have already integrated the multi-dimensional nature of a sustainable development strategy within their plans and supporting institutions (Swanson et al., 2013). With regard to horizontal coordination, Bhutan's Gross National Happiness Commission provides an overview for each ministry of the linkages to the objectives and strategies of the country's 10th national development plan, along with expected results/targets, relevant Millennium Development Goals and time frames. With regard to vertical coordination, Bhutan's Gross National Happiness Commission also coordinates the local five-year planning process, and there are 20 local five-year plans supporting the 10th national development plan.

[6] The Basque Country is one of Spain's 17 autonomous regions. It is situated in the north of the Iberian Peninsula, forming the border between France and Spain along the Bay of Biscay, right at the centre of a major communications route linking Europe with the peninsula. The Basque Country has 251 municipalities spread over its three provinces with a population of approximately 2 million.

BOX 4: THE SUCCESS OF LOCAL AGENDA 21 IN THE BASQUE COUNTRY OF SPAIN

Vertical integration is achieved from the ground up via an impressive network of Local Agenda 21s. Local Agenda 21s are local sustainable development plans, branded after the Agenda 21 plan of action adopted at the first World Conference on Environment and Development in 1992. The progress made in the development of Local Agenda 21 processes over the last decade in the Basque Country has been both notable and constant. Whereas in the year 2000, 92 per cent of municipalities had still not initiated Local Agenda 21 processes, by 2010 95 per cent of them had approved plans (Udalsarea21, 2010).

As a result of the promotion of Local Agenda 21, action plans have been implemented in almost all Basque municipalities (a total of 239 plans with approximately 25,000 actions). The following are six specific actions that have helped promote Local Agenda 21 in the Basque Country Plans (Udalsarea21, 2010):

- Close coordination and alignment of Local Agenda 21 with supra-municipal policies (Environmental Framework Programmes and the Basque Country's EcoEuskadi Sustainable Development Strategy 2020).
- The adoption of a strategic approach to the development of the Local Agenda 21 Local Action Plans, using the strategic marketing instrument AIDAR (providing specific support services based on a municipality's stage of sustainable development: **A**ttention, **I**nterest, **D**emand, **A**ction, **R**ecognition) and the Udalsarea 21 Strategic Plans.
- The development of a networking culture and a culture of shared services within the framework of Udalsarea 21.
- Viewing the Local Agenda 21 Local Action Plans annual management instruments for local sustainability policies, which incorporates to this end a common methodology and shared computer and technical services.
- Viewing Local Agenda 21 as a model for achieving global quality in processes and for ensuring continuous improvement.
- The setting up of the Basque Country Local Sustainability Observatory.

4.0 Governabilities: The Core Abilities of Governance for the 21st Century

Governance focused on sustainability understands the inherent interrelationships between environmental, social and economic well-being and endeavours to find win-win-win situations where they exist. Governance that is accountable to the public evaluates decision-makers based on their abilities to meet goals and targets that are evidence-based and verifiable. Governance that is adaptable is continuously learning, refining targets in light of new information and improving policies based on regular assessment. These three abilities are so intimately related and important to governance in the 21st century that we felt compelled to introduce new terminology to describe it: *governAbilities—the collective pursuit of sustainability, accountability and adaptability*.

We observed how these three core abilities of governance are linked by common principles, including being outcome-based, multistakeholder, forward-looking and multi-dimensional. Furthermore, we identified a set of pragmatic governance tools that can simultaneously help advance sustainability, accountability and adaptability objectives, namely: *outcome-based budgeting and indictor information systems, multistakeholder councils, scenarios and scenario planning and integrated strategies*. Well-being and sustainability indicator information systems reflect on the highest order of outcomes aspired to in development efforts and provide the evidence base for linking retrospective and prospective analysis and informing outcome-based planning and budgeting processes. This in turn, creates a common reference point for governments, businesses and civil-society organizations to realize collaborative action on specific outcome-based issues. Multistakeholder deliberation is the fabric that ensures that social capital is built in any planning process, which in turn provides multiple perspectives to help address and make key adaptation decisions and facilitates the self-organizing potential to help respond to unanticipated events. Scenarios and scenario planning provide that critical ingredient that formalizes a collective thought process about the future—to ask important questions about what drivers might affect our future, how these interrelate and how we might respond to them.

The advancement of society in the turbulent 21st century will require close attention by all governments to the very basic plan-do-check cycle of continuous improvement. Executing this cycle effectively will require tools that collectively deliver sustainability, accountability and adaptability. A breakdown in any one of the *governAbilities* in the 21st century will lead to a breakdown in governance. Among the core tools for collectively delivering sustainability, accountability and adaptability are scenarios (scenario planning in particular), a long-term integrated whole-of-government strategy, outcome-based budgeting (the budgeting for outcomes approach in particular), well-being and sustainability indicator information systems, and the multistakeholder council.

FIGURE 5. THE CORE TOOLS FOR GOVERNABILITIES IN THE 21ST CENTURY

The multistakeholder council takes centre stage in relation to *governAbilities* tools. This is because the multiple perspectives that such a council can access is necessary for informing the scenario-planning process and for providing the legitimacy to the long-term integrated strategy that emanates from the scenario-planning process. A multistakeholder council is also necessary for informing the BFO process and, most specifically, the third BFO step, which involves setting the priorities of government, that is, the long-term outcomes that citizens care most about. The multistakeholder council also provides the necessary multiple perspectives and legitimacy to assist in the identification of well-being and sustainability indicators that enable monitoring of progress of the long-term whole-of-government strategy and the BFO process, and to also provide recommendations for improvement and adaptation.

The scenario-planning tool also has links with the other tools and therefore is a foundation piece for advancing *governAbilities*. Scenario planning is most effectively implemented as a multistakeholder process to ensure there is sufficient perspective around the table to unpack the complexity of the issue and to break out of conventional sector-specific thinking. Additionally, scenarios are a forward-looking mechanism meant to illuminate key drivers of change and plausible futures to inform planning and strategy. Therefore, this tool is suited to the preparation of robust and adaptive long-term strategies for development, particularly when the process is driven by multistakeholder participation. Finally, scenario planning is inherently an evidence-based process, requiring the identification of outcome-based indicators that can be used to test for performance under different plausible future conditions and requiring monitoring over time to detect which plausible futures are coming to fruition and which adaptive actions are necessary to trigger. Scenario planning is also a process that can be executed in rapid form (i.e., day or week time frame) or more comprehensively (i.e., month to year timeframe), making it a versatile tool from a budget and schedule perspective.

While we can find no single case example of a jurisdiction that has or is implementing all of these tools at once, there are good examples of implementation for each of these tools individually. Table 3 presents a synthesis of noteworthy case examples of good practice for each of the *governAbilities* tools featured above.

TABLE 3. SYNTHESIS OF GOOD PRACTICE EXAMPLES FOR *governAbilities*

governAbilities PRINCIPLES	*governAbilities* TOOLS	GOOD PRACTICE EXAMPLES
Outcome-based	Outcome-based Budgeting	• Washington State Budgeting for Outcomes process (1990s) • Alberta Results-based Budgeting Act
	Indicator Information Systems	• Jacksonville Community Council Inc.'s Community Indicators • Winnipeg Wellbeing Indicator System – Peg • Oregon Benchmarks (circa 2010) • German Federal Statistics Office – progress monitoring of the National Sustainability Strategy
Multistakeholder	Multistakeholder Councils	• German Council for Sustainable Development • Finnish National Commission on Sustainable Development
Forward-looking	Scenarios and Scenario Planning	• Royal Dutch Shell corporate scenario planning • U.S. Federal Highway Administration • German Council for Sustainable Development's Visions 2050 Project • Commission on the Future of Sweden and its final report, *Sweden in a World of Growing Uncertainties*
Multi-dimensional	Integrated Strategy	• ÖSTRAT – Austrian Sustainable Development Strategy and its vertical coordination mechanism; the Actors Network Sustainable Austria and its horizontal coordination mechanism the Committee for a Sustainable Austria • Spain's Basque Country EcoEuskadi 2020 Sustainability Strategy and its Local Agenda 21 Network (Udalsarea 21) • Bhutan's Gross National Happiness Commission and its Five-Year Plan

5.0 Conclusions

The 21st century will undoubtedly mark a turning point in history. Through our sheer numbers and our modern technology, we have the ability to affect the environment on a global scale; our global economy is more real-time connected than ever; and our citizens can share information and mobilize instantaneously with a swipe of a finger. Our environment, economy and our people each respond to pressures and changes in unpredictable ways. If we assume we do not need to rethink the ways in which we govern regions, nations, states and communities in the 21st century, we are in for a rough ride.

Three abilities have merged to the core of any government's social license to operate and ability to plan and act in this, the most complex and fragile of centuries. We call these concepts of sustainability, accountability and adaptability *governAbilities*.

Most governments of today are pursuing these *governAbilities*, albeit disparately, and with responsibilities often spread to different departments—for example, sustainability goes to the environment department, accountability to the finance department and risk management to the auditors. The 21st century moves much too fast and is far too unforgiving for such disconnected action. The good news is that we observe in these three abilities a common set of principles driving them, suggesting that governance in the turbulence of the 21st century must be: outcome-based, multistakeholder, forward-looking and multi-dimensional. This commonality suggests room for considerable improvement with regard to collaboration among environment, finance and auditing departments for both short and long-term planning and implementation functions.

And there is more good news. Given that common principles drive the pursuit of sustainability, accountability and adaptability, there exist many approaches and tools currently in practice to help governments with the collective pursuit of sustainability, accountability and adaptability. The tools for *governAbilities* include: indicator information systems and outcome-based budgeting, multistakeholder councils, scenarios and scenario planning and integrated strategies (i.e., sustainability strategies and Local Agenda 21s).

As one last bit of good news, two tools in particular, scenario planning and multistakeholder councils, are foundational and useful for advancing all of the common principles of being outcome-based, multistakeholder, forward-looking and multi-dimensional. Scenario planning—the art and practice of thinking about and planning for plausible futures—has grown significantly over the past few decades and has proven effective in helping organizations, communities and governments plan for sustainable development, be accountable to progress and be adaptive in the face of change and surprises. Multiple perspectives and legitimacy are paramount for delivering each of the common *governAbilities* principles. The practice of establishing and using multistakeholder councils is well established and is an effective means for implementing indicator information systems, outcome-based budgeting, scenario planning and integrated strategies.

The governance toolkit for the 21st century is ready.

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Appendix 1: The State of Washington's Budgeting for Outcomes 10-Step Process

1. Get a grip on the problem (i.e., what is the fiscal crisis precisely).
2. Set the price of government.
3. Set the priorities of government: the results that citizens care most about (~five to ten long-term outcomes).
4. Allocate money to each outcome goal (divide the available funds among the priority outcomes, with a set-aside for overhead and internal services).
5. Figure out what really matters and develop a purchasing plan for each outcome goal (establish results teams for each outcome made of knowledgeable persons in the issue areas to create 'outcome maps').
6. Ask programs and agencies to submit their best offers (via a Request for Results to consist of the desired outcome, three indicators for measuring it, the strategies for achieving the outcome and the budget)
7. Results teams rank the offers from most cost effective to least, seeking to buy the best results for the money, then send out the rankings and ask for better offers.
8. Results teams do their final rankings and meet with one another to make necessary adjustments
9. Leaders make the final decisions and submit their budgets to the legislature
10. After the budget passes, the executive branch can use the offers to negotiate performance agreements with the sellers.

Source: Osborne and Moore (2010)

Appendix 2: Example of Budgeting for Outcomes as Implemented by the Government of Alberta

The below expenses provide an illustration whereby forecasted and actual expenditures for the three strategic plan priority areas by key departments are reported on an annual basis.

Expense by Priority Areas

(millions of dollars)

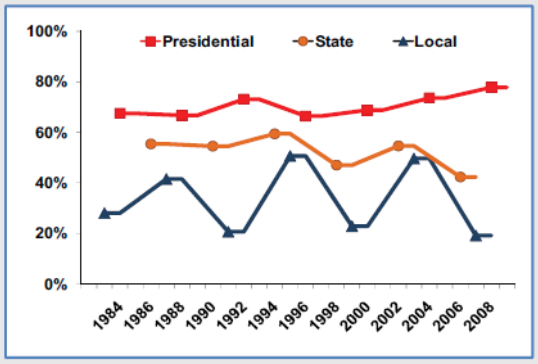
	2010-11 Actual	2011-12 Budget	2011-12 Forecast	2012-13 Estimate	2013-14 Target	2014-15 Target
Investing in Families and Communities						
Culture and Community Services	250	218	242	231	225	220
Health and Wellness	14,736	14,947	14,809	15,982	16,787	17,454
Human Services	2,403	2,398	2,424	2,556	2,585	2,607
Justice	489	500	528	537	557	563
Municipal Affairs	1,576	1,317	1,642	1,335	1,475	1,423
Seniors	2,048	2,107	2,141	2,461	2,607	2,733
Solicitor General and Public Security	655	682	685	772	809	817
Tourism, Parks and Recreation	164	163	179	182	186	188
	22,321	**22,332**	**22,650**	**24,056**	**25,231**	**26,005**
Securing Alberta's Economic Future						
Advanced Education and Technology	3,297	3,015	3,053	2,938	3,064	3,120
Education	5,985	6,152	6,379	6,543	6,847	6,846
Finance	1,102	1,156	1,140	1,199	1,222	1,252
Infrastructure	683	1,524	1,397	1,364	1,316	1,422
Service Alberta	276	300	296	318	315	316
Transportation	1,880	1,952	2,012	1,885	1,988	1,850
Treasury Board and Enterprise	58	80	61	169	171	172
	13,281	**14,179**	**14,338**	**14,416**	**14,923**	**14,978**
Advancing World-leading Resource Stewardship						
Agriculture and Rural Development	973	975	957	1,002	1,009	1,012
Energy	351	443	416	539	780	737
Environment and Water	289	293	282	318	259	264
Intergovernmental, International and Aboriginal Relations	202	172	174	191	192	192
Sustainable Resource Development	427	290	576	291	302	307
	2,242	**2,173**	**2,405**	**2,341**	**2,542**	**2,512**
Other						
Executive Council	30	30	30	32	32	32
Legislative Assembly	98	119	125	133	120	124
In-year savings	-	(240)	(240)	(360)	(360)	(360)
	37,972	38,593	39,308	40,618	42,488	43,291
Debt servicing costs	472	588	509	531	549	560
Total Expense	**38,444**	**39,181**	**39,817**	**41,149**	**43,037**	**43,851**

Appendix 3: Community Quality of Life Summary Report from the Jackson Community Council Inc.

Key governance indicators:

Voter Turnout

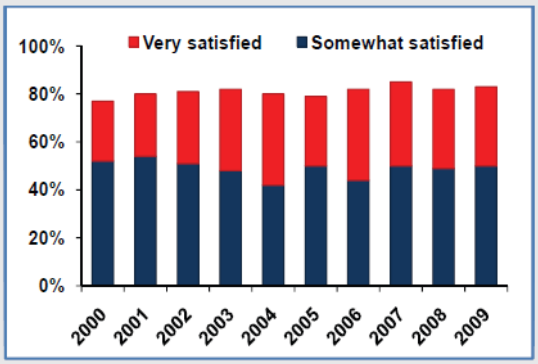
DUVAL COUNTY: 78%



Source: Supervisor of Elections

Satisfaction with City Services

DUVAL COUNTY: 83%



Source: American Public Dialogue

Supporting indicators:

	Previous	Latest	Change
Diverse and Representative Government			
Elected Officials: People of Color	29%	26%	- 3%
Elected Officials: Women	24%	26%	+ 2%
Neighborhood Organizations	597	591	- 6
Survey: Can You Influence Government?	26%	25%	- 1%
People Keeping Up With Local Government News	58%	62%	+ 4%

Source: Jacksonville Community Council Inc. (2013b)

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