Planning Ethics for Big Data in Smart Cities:
A Report for the American Planning Association

by

KAREN HO CHUN FUNG
B.A., Simon Fraser University, 2008

A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS (PLANNING)
in
THE FACULTY OF GRADUATE STUDIES
School of Community and Regional Planning

We accept this project as conforming
to the required standard

..............................................
..............................................
..............................................
..............................................

THE UNIVERSITY OF BRITISH COLUMBIA
MARCH 2016
© Karen Ho Chun Fung, 2016
# Table of Contents

**Front Matter**
- Table of Contents
  - i
- Executive Summary
  - ii
- List of Tables
  - iv
- List of Figures
  - iv

1. **Introduction**
   - 1.1 Statement of Purpose
     - 1
   - 1.2. American Planning Association
     - 2
   - 1.3 Research Design & Report Outline
     - 5

2. **Background**
   - 2.1. Planning Ethics
     - 7
   - 2.2. Planning & Technology
     - 11
   - 2.3. Big data
     - 13

4. **Discussion**
   - 4.1. Negotiating frames between Planning and Data Science
     - 27

5. **Recommendations**
   - Recommendations for Ethics Training on Big data For Smart Cities
     - 29
   - Recommendations for supporting planning perspective in big data ethics discourse
     - 31

6. **Conclusion**
   - 32

**Bibliography**
   - 33

**Appendices**
- Appendix A. APA SCTF Recommendations
  - 36
- Appendix B. AICP Code of Ethics and Professional Conduct
  - 38
Executive Summary

In 2015, American Planning Association (APA)’s Smart Cities and Sustainability Task Force (SCTF) presented the Board of APA with a set of recommendations for the planning professional association to address the growing interest in smart cities, defined as the application of information and communication technologies (ICTs) and other emerging infrastructure-enhancing tools to issues in urban settings. One recommendation directed the APA’s certification program to incorporate training on the ethics of big data (a term referring to the capabilities and practices of working with, analyzing and deriving insights from very large datasets enabled by ubiquitous computerization and widespread networking). Drawing on APA Code of Ethics; emerging practices on using and analyzing large sets of data from public and private organizations; and the growing discourse on the professional ethical considerations of doing so, the objective of this report is to present guidance on how to incorporate big data into existing ethics training provided by APA and American Institute of Certified Planners (AICP). These recommendations seek to balance the enhanced capabilities enabled by big data, with the aspirations of the planning profession (as stated in the AICP Code of Ethics) in the course of performing planning tasks; and to highlight the present and potential contributions of planners, planning theory and planning practice to emerging interdisciplinary practice on the use of and broader impact of big data on society, institutions and communities. The history of planning ethics, especially as it pertains to forecasting, is reviewed, as is the use of technology in support of public participation in planning. Big data is defined in relation to sample data techniques, and existing concerns about the ethical challenges of using big data from outside planning are described. Referencing existing ethics training materials, a series of recommendations are presented with the aim of ensuring
planners receive ethics training referencing challenges associated with big data through the AICP certification maintenance program.
Planning Ethics for Big Data in Smart Cities

**List of Tables**

Table 2.1. Comparing small and big data.

Table 2.2. Sources of big data.

Table 2.3. Guidance for ethics training sessions.

**List of Figures**

Table 4.1. Illustration of overlapping areas in open data, open government and big data.
1. Introduction
In 2015, American Planning Association (APA)’s Smart Cities and Sustainability Task Force (SCTF) presented a set of recommendations for the planning professional association to address the growing interest in smart cities, the application of information and communication technologies (ICTs) and other emerging infrastructure-enhancing tools to issues in urban settings. One recommendation directed the APA’s certification program to incorporate training on the ethics of big data (a term referring to the capabilities and practices of working with, analyzing and deriving insights from very large datasets enabled by ubiquitous computerization and widespread networking). Drawing on APA Code of Ethics; emerging practices on using and analyzing large sets of data from public and private organizations; and the growing discourse on the professional ethical considerations of doing so, the objective of this report is to present guidance on how to incorporate big data into existing ethics training provided by APA and American Institute of Certified Planners (AICP). These recommendations seek to balance the enhanced capabilities enabled by big data, with the aspirations of the planning profession (as stated in the AICP Code of Ethics) in the course of performing planning tasks; and to highlight the present and potential contributions of planners, planning theory and planning practice to emerging interdisciplinary practice on the use of and broader impact of big data on society, institutions and communities.

1.1 Statement of Purpose
In 2014, the American Planning Association (APA) requested that the chairs of three of its volunteer topic-focused groups (Technology, Transportation and Sustainable Communities) form the Smart Cities and Sustainability Task Force (SCTF). SCTF was mandated to address the implications of emerging technologies for “smarter, more sustainable, and resilient cities”
on planning practice. In April 2015, at its conclusion, APA Board received the SCTF’s final report, which summarizes the results of its member engagement on the topic of smart cities, as well as providing eight recommendations (included in Appendix A) for adding value to members’ planning practice, educating planners on smart cities, and providing leadership on Smart Cities. This project builds on the SCTF final report to explore and expand upon one specific recommendation: for the APA’s certification body, American Institute of Certified Planners (AICP), to offer ethics training on big data, one of the major components of what is being proposed with smart cities. As recommended in the SCTF report:

Offer ethics training related to big data. Ethics training is a fundamental part of AICP’s continuing education requirements as planners. Ethics concerns related to big data would be a timely topic to consider for targeted ethics training by APA. (APA SCTF, 2015)

Using a qualitative research approach, this project provides 1) an overview of the ethical issues associated with big data as identified in and beyond planning practice, in order to develop ethical training materials for certified planners; 2) identifies mechanisms for planners to contribute to and to remain current on the emerging interdisciplinary discourse on big data, its applications and evolving ethical dimension; and 3) recommends additional steps that support planners’ understanding of big data while complementing other SCTF recommendations for APA.

1.2. American Planning Association

The American Planning Association (APA) is a non-profit education organization mandated to support planning practice. Since 1978, it has been the professional association for planners, when it was amalgamated from the previous American Society of Planning Officials (established 1934) and the American City Planning Institute (established 1917)

1. Embedded within the APA is the American Institute of Certified Planners (AICP), which oversees activities associated with certifying planners, defining direction for planning education, setting
Planning Ethics for Big Data in Smart Cities

standards of practice and promoting ethical planning. As of September 2015, APA had 37,604 members, of whom 16,170 were also certified planners.[2]

The APA is further made up of Chapters, to assist members to direct attention to issues constrained to specific geographies or state jurisdictions; and Divisions, which focus on specific topic areas. The APA Board has also identified sustainability as a core activity and interest for planners through its Sustaining Places Initiative, which prioritizes the integration of a sustainability lens into all aspects of APA’s existing work.

**Smart Cities Task Force**

In April 2014, as an extension of the Sustaining Places Initiative, the Smart Cities Task Force was convened, co-chaired by the chairs of the APA divisions for Transportation Planning, Technology and Sustainable Communities. It was given the mandate to report back to the APA board on the implications of smart cities tools on sustainable communities, as well as to recommend actions the APA could take to provide value to its members, show leadership on the topic and to educate the public and community leaders in order to increase the use of tools by planners, citizens and elected officials (APA SCTF, 2015: 4). The task force defined smart cities as cities “which use ICTs to engage citizens, to deliver city services, and to enhance urban systems, resulting in cost efficiencies, resilient infrastructure, and an improved urban experience” (6).

As part of their information gathering effort, the SCTF engaged the APA membership on the topic of smart cities through an online survey; through an online dialogue tool called MindMeister; and through a best practice sharing website known as the Innovation Portal. In the survey, green buildings and site design, socio-economic disparities, and health were ranked as the top three most important topics by survey participants out of the 14 topic areas
Planning Ethics for Big Data in Smart Cities

identified by the Task Force. In keeping with this finding, equity and the digital divide were highlighted in the recommendations as a key component of smart cities, citing planners’ role in ensuring that new technologies do not exacerbate existing inequalities or issues of access.

The SCTF also identified three challenges for planners working with smart cities, all of which have some bearing on this project’s aim to support AICP in providing ethics training for big data. These challenges, paraphrased, are:

• **Frame the Plan** – “Planners need to connect specific performance measure with a community’s vision of what it is trying to achieve. Tools for data collection and analysis must follow from the articulated goals, and the community must be in agreement with them.”

• **Avoid Distraction** – “Planners must stay current with the capabilities of smart cities as they develop, but also leave out features or tools that do not speak directly to the community’s plan. The inverse also applies: outdated or obsolete practices that no longer fulfill their intended purpose should be address expediently.”

• **Maintain the Public Trust** - “A planner has an ethical challenge to make sure all data is used in the best interest of a free community. Maintaining the public trust also requires a planner to ensure that all community members have equitable access to the information and benefits of their Smart City.” (APA SCTF, 2015, 9)

**Ethics Training for Certified Planners**

Certification as a planner consists of meeting a set of education and experience requirements, as well as passing an AICP exam and the payment of dues³. Having received certification, AICP members are then required to engage in certification maintenance (CM), documenting participation in professional development and education activities as well as
Planning Ethics for Big Data in Smart Cities

their continued employment in a planning-related capacity. These activities are commonly
done at the APA National Planning Conference, held annually; at chapter events, typically
regional in focus; or through online learning courses attended remotely. CM requirements are
to be met once every year, with 1.5 CM credits for ethics needed for each two-year cycle.

1.3 Research Design & Report Outline

The purpose of this report is to identify the connections between the use of big data in
planning and planning ethics, in order to make recommendations to support the development
of training material for AICP. In order to arrive at these recommendations, the project will
start by providing an overview of planning’s historical engagement with the ethics of
forecasting. It will then briefly describe the use of information and communication
technologies (ICTs) in planning, in order to better contrast this with the use of big data and
the broader program of smart cities of which big data forms a key part. In so doing, the
context will be in place to follow emerging interdisciplinary discourse on the ethics of using
big data and managing and understanding its impacts to society.

In keeping with the format of existing ethics training materials, the recommendations for
the ethics training on big data will seek to be hands-on, with a focus on learning through
presentation of narratives and cases, as well as drawing on practical examples as much as
possible. Given the fast pace of change on the topic of big data, the intent will be to convey
both the opportunities afforded by using big data, as well as the risks and limitations of big
data from an ethical perspective, informed by the previous background discussion.

The findings will also note where items overlap with other recommendations or findings
from the SCTF final report, in order to assist in cross-pollination education or leadership-
related actions. In keeping with the precedent set by Decker (2014), this project seeks to provide “a steady stream of optimism, tempered by realism.”

---

2. Background
Before addressing the planning ethics of big data, it is worth assessing the degree to which planning as a profession and planners in practice have previously encountered the issues most closely associated with the ethics of big data and its anticipated applications. This section begins with a brief review of planning ethics in the history of the development of the profession, as well as the public’s perceptions of planning. It then touches on planning’s history with technology and forecasting, as well as more recent analysis of how planners use technology and how this fits into a broader move to incorporate about technology in public administration in ways that are shaping planners’ everyday interactions with members of the public.

From here, we can grapple with big data directly. The second half of this section foregrounds what precisely big data is, how it varies from existing sample data collection techniques and assumptions, and the kinds of applications of big data most closely associated with smart cities. As a deeply interdisciplinary area of emerging practice, the ethical concerns associated with the rise of big data have not gone unnoticed by other professionals or practitioners; an overview of ethical concerns from outside of planning will give a sense of the conversation in progress on big data’s impact and influence on society as a whole.

2.1. Planning Ethics
In order to create ethics training that supports the work of certified planners, a basic understanding of how ethics manifests in planning education and training, planning scholarship, and is ultimately used or reflected in planning professional practice provides necessary context to AICP’s present ethics training. Campbell (2012), drawing on the work of Hendler (1995) and Marcuse (1976) as well as her own planning practice summarizes the
overarching themes themselves as well as their evolution as planning has progressed. Many of
the themes identified here will be touched upon again at the end of this section examining
ethics in big data.

Starting in the 1970s, as planning has become increasingly understood as having a political
nature that makes it more than simply a technical profession, so too has the need for
incorporating an awareness of and engagement with questions of ethics. This coincided with
debate about the value of having a code of ethics for planning. Some questioned the extent to
which the creation and enforcement of a code would constrain practitioners and “erode the
socially progressive qualities of planning’s origins and inheritance” in exchange for the status
and prestige associated with the professionalization of planning (Campbell and Marshall,
2005).

On the topic of planning ethics discourse and planning education, Campbell recalls
vigorous discussion on how ethics would be incorporated into planning education curricula,
and the value of balancing normative approaches to ethics with respect for their professional
autonomy, in order to avoid turning ethics courses into “a vehicle for transmitting the private
prejudices of the instructor” (Kaufman, 1983, as quoted by Campbell). Campbell also
expressed curiosity at one particular feature of discussions about ethics and planning: its
seeming politeness and “lack of impassioned argument” given the stakes and import involved
in the topic. She explains, “[there is a] strong imperative not to be seen to advocate for a
particular ethical stance, and a related fear of being open to accusations of imposition, has had
a huge influence on the evolution of debate about planning,” although she does not ascribe
any particular explanation for this feature.

In looking to the future of ethics in planning, Campbell observes a common trend in both
planning research and planning practice of making ‘others’ (who she identifies as senior
management, government edicts and codes of conduct) define what constitutes ethical behaviour for planners, and how these are underscored by outsider systems of rewards and incentives. This is in contrast to the earlier conceptions of ethics, which strongly emphasized an internalization of moral standards of behaviour for good planning. Campbell notes certain statements that reflect this particular view on planning ethics, such as ‘Nobody told me’, 'That’s not my area', or ‘I was just doing my job,’ which ultimately serve as justifications. Campbell further connects this to an increasingly emphasis on ethics as a question of individual behaviour, and the resulting distance from “a culture of collective debate [or] collective responsibility” in planning.

**Ethics and Forecasting**

Of particular relevance to this project’s topic of big data is the writing of Martin Wachs (1985), who advocated for explicit ethical standards to guide the use of forecasting models by planners. Drawing on his own experience from planning practice, he states that planners’ commitment to science and data-driven methods, and to advancing the state of knowledge, works inherently at cross-purposes to an inclination towards advocacy. This is especially the case when planners are working on behalf of employers or clients seeking data or models in support of particular actions.

Wachs (1988) further highlights an additional possible misuse of models, which is to obfuscate or conceal the assumptions used to construct them. Assumptions are necessary for creating forecasts, but a forecast is only as reliable and trustworthy as its assumptions about variables in a problem truly reflect reality, and presumes trends even as our knowledge of its underlying forces may be imperfect or incomplete. The technical expertise of staff engaged in this work, writes Wachs, “contributes far more to one’s ability to do the calculations than it
Planning Ethics for Big Data in Smart Cities

does to one’s ability to form the appropriate assumptions about future values of the parameters” (Wachs, 1985: 250). Wachs further argues for planners to be transparent by proactively disclosing what assumptions have been made to arrive at a given model’s results, so as to permit independent verification. This further exacerbates the tension between a planner’s objectivity, and the pressure to produce an outcome palatable to clients.

Wachs, analyzing the predecessor to the current AICP code of ethics (1988), observes that the conflict in these roles of advancing knowledge and serving one’s clients is embedded in the code itself — in clauses that direct planners to “exercise independent professional judgement,” but then immediately require that planners “accept the decisions of the client or employer concerning the objectives and nature of the professional services” (Wachs, 1988: 2).

Both these clauses remain in the code of ethics revised in 2009; however, they are now located in Section A: Principles We [Planners] Aspire To. The clause closest in spirit in Section B: Rules of Conduct, states, “We shall not deliberately or with reckless indifference fail to provide adequate, timely, clear and accurate information on planning issues.”

Examining the code of ethics equivalents in the professional organizations of other professions working similarly with forecasting models and quantitative data (specifically, statisticians and public opinion researchers), Wachs proposes amendments and elaborations to the code that would more set more firm ethical standards on information management, statistical practice, and forecasting in planning, and for the professional association to discipline those found “fudging” or falsifying datasets in order to ensure integrity and trust in planners as professionals. The current code, updated in 2009, contains no explicit references to modelling, forecasting or technology-aided analysis. 4

While forecasting is key to the discussion of emerging applications of big data, it is hardly the only technique that planners rely on in the course of their work, or the only application
Planning Ethics for Big Data in Smart Cities

that is relevant for applying big data methods to cities and communities. The next section touches on other technologies that planners may use in the course of planning work, as well as how these tools fit with the diversity of approaches to planning tasks.

2.2. Planning & Technology

Using technologies and tools to conduct analysis, gather information or communicate causes and effects in the course of making a decision are all commonplace tasks for planners, whether they work with the public, decision-makers or in collaboration with professionals within or outside their organizations. This section highlights the state of theory on planners’ use of information technologies. Understanding how planning practitioners and the diversity of preferences within the planning profession in framing the use of tools, will allow us to build effective bridges between how AICP members currently use technology for assisting in and accomplishing planning tasks, and the new techniques emerging from big data practice being proposed by proponents of smart cities. As we have already discussed the ethical dimensions in the historic use of modelling for planning, this section concentrates primarily on the use of technology for expanding stakeholder and public participation, as well as theories on whether and how participation informs planning outcomes.

How and whether these tools do or don’t get used in planning is subject to a number of factors specific to each planning situation. These may range from individual planners’ comfort levels with tools; the degree to which the use of technology is valued by the public or stakeholders participating in a process and the degree of access groups have to tools in comparison to other participation methods; culture and attitudes towards technology within the organization leading a consultation (Granberg and Åström, 2010), or the prioritization of resources to retain external support. While much of the optimism surrounding the use of ICTs
Planning Ethics for Big Data in Smart Cities

has been to find new ways to expand participation and public input into planning processes, and to open avenues for collaboration, Silva (2010) reminds us that tools are but one feature of an overall planning approach. The role ascribed to various kinds of information in a planning paradigm (rational-comprehensive, systems theory, collaborative planning) or planning approach (bottom-up or top-down) guiding a planning activity still largely determines what information is collected, generated or analyzed in the course of a planning process. How this information is then weighted and valued is a similarly purposeful decision (whether it be made explicit or not). The degree to which the dynamics, values and preferences of various groups, stakeholders and individuals are reflected in the final outcomes, and actions resulting from a decision persist, even if tools or methods make some flows of information easier or more difficult compared to others.

The interplay of knowledge, practice and structures of technology in the pursuit of the public good in planning can be clearly seen in the recent case of scenario planning practice. Scenario Planning is the name given to a category of approaches aimed to using scenarios to illustrate possible courses of action and assess the past, present and future (Chakraborty and McMillan, 2015). In urban planning, they are used to anticipate and visualize the future outcomes of actions made in the present.

While scenario planning techniques have long been in development, the availability of and enhanced usability of tools for helping build and evaluate more complex scenarios have made them more attractive and viable to use in planning processes. Sensing a gap between what was common taught about scenario planning in planning education and what was needed for its use, scholars and planners in practice experienced in using scenario planning tools, jointly developed curricula and guides to inform planners of the role scenario planning tools could play in support of transparent and participatory planning processes. Furthermore, scenario
Planning Ethics for Big Data in Smart Cities

planning proponents have spearheaded the creation of open access scenario planning tools, alongside standards which allow for interoperability between open, collaboratively-maintained tools, and proprietary tools (Holway et al, 2012). While its wider adoption and use of scenario planning is not certain, in taking these steps, scenario planning proponents have laid a technical groundwork to enable the transparency and ability to verify forecasts that had previously been advocated for by Wachs (1985).

2.3. Big data

As the proponents of smart cities technologies at the Smart Cities Council (2014) describe, big data lies at the heart of smart cities — specifically, being able to collect, communicate (centralize), and “crunch” (analyze) it. If smart cities are, as Townsend (2013) puts it, “places where information technology is combined with infrastructure, architecture, everyday objects, and even our bodies to address social, economic and environmental problems,” then data — being generated and managed by those technologies reflecting the movements and states of items and systems — can be understood as the lifeblood of such smart cities. While the processes at the heart of the big data practice superficially have a great deal of similarity to existing practices, the sheer amount of data imposes new requirements and constraints to make sense and derive meaning out of it, in order to apply its insights for problem-solving and action. The resolution and degree to which it organically tracks everyday individual behaviours, alongside its ubiquity, mean that big data has a number of notable features that differentiate it significantly from “small” data gathered using traditional sampling techniques (Kitchin, 2014). Meanwhile, new practices around data-sharing (Gurin, 2014), collaborative tool development and sharing of code and algorithms (Mergel, 2015) allow for new forms of
Planning Ethics for Big Data in Smart Cities

collaboration and pooling of resources between different groups working with both sample (or “small”) data and big data.

Taken together, the growing use of big data both shifts and reinforces the power that professionals (including planners) have on the systems affecting communities and individuals working, residing in and contributing to them. For this reason, there is a duty to attend to ethical considerations in order to prevent misuse, widespread harm or the breach of individual rights. This section begins by exploring noteworthy features of big data, touching on the related phenomena of open data and growing interest in civic technology. It will then move onto assess the state of discourse on the ethics of using big data and its impact on society, and the groups in praxis those leading that conversation.

**What is Big Data?**

There is a great deal of interest, enthusiasm and optimism for the amount of value and insight that can be realized from very large datasets. There are several noteworthy qualities about big data, however, aside from its size that lends itself to uncovering new insights and exercise new capabilities. Table 2.1 summarizes some of these features along six features of data as summarized by Kitchin (2013):

<table>
<thead>
<tr>
<th></th>
<th><strong>Small data</strong></th>
<th><strong>Big data</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>Limited to large</td>
<td>Very Large</td>
</tr>
<tr>
<td><strong>Exhaustivity</strong></td>
<td>Samples</td>
<td>Entire Populations</td>
</tr>
<tr>
<td><strong>Resolution and identification</strong></td>
<td>Course and weak to tight and strong</td>
<td>Tight and strong</td>
</tr>
<tr>
<td><strong>Relationality</strong></td>
<td>Weak to strong</td>
<td>Strong</td>
</tr>
<tr>
<td><strong>Velocity</strong></td>
<td>Slow, freeze-framed / bundled</td>
<td>Fast, continuous</td>
</tr>
<tr>
<td><strong>Variety</strong></td>
<td>Limited to wide</td>
<td>Wide</td>
</tr>
</tbody>
</table>
Planning Ethics for Big Data in Smart Cities

<table>
<thead>
<tr>
<th>Flexible and scalable</th>
<th>Low to middling</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 2.1. Comparing small and big data. (Reproduced from Kitchin, “The Data Revolution,” 2014.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Many of the statistical techniques that are traditionally employed to allow large inferences to be made from samples of a population are not needed with big data, which in many cases can encompass data being generated by an entire population of concern. Descriptions of the size, expansiveness and seeming omnipresence of big datasets can border on hyperbolic. However, the enabling phenomena that have led us to our current capabilities have, in some cases, been in taking hold in our daily life for over half a century: (Kitchin, 2013):

- Computation - as advances have been made in hardware, computing power and memory have been enhanced in several orders of magnitude since the start of computation in the 1950s.
- Networking - through the development of the Internet and wireless protocols, as well as networking capabilities, computational devices are also now linked. Bandwidth (the amount of data that can be transmitted) has also grown dramatically to permit transfers of large amounts of information at great speed.
- Pervasive and Ubiquitous Computing - as computer hardware has gotten more powerful, it has also gotten smaller and more conspicuous, allowing computing to be embedded in almost every facet of daily life. “Pervasive computing” refers to the adding of computational power and access to ICT networks to everyday fixed objects and environments to make them interactive and ‘smart’” (Dourish, as quoted by Kitchin, 2013), with computation “in everything” (commonly known as the Internet of Things); whereas ubiquitous computing refers to devices that people carry on them at all times (such as mobile phones, medical devices or watches), so that computation is “in every place.”
- Indexical and machine-readable identification - this refers to the development of systems and protocols that allow more phenomena and items in the world to be indexed by automated means, establishing relationships with an individual, location or other significant indicator. Examples include automatic facial recognition, gait recognition, and automatic license plate identification.
- Data storage - with the amount of information being generated due to transactions and records, new techniques have been developed for storing data. It has gotten to the point where it is cheaper to save everything than to develop methods to discard and
preserve what’s seen as valuable. These preservation techniques favour raw data over data that preserves the structure of relationships between items.

Taken together, these seven developments make large datasets relatively common. Depending on the nature of the organization that collects this information, they may perceive this as an asset to use internally for innovating to improve experiences and service offerings, or they may see the dataset as a commodity to monetize and find a buyer for.

---

### Table 2.2. Sources of big data. Adapted from Kitchin, “The Data Revolution,” 2014

<table>
<thead>
<tr>
<th>Type</th>
<th>Directed Data</th>
<th>Automated Data</th>
<th>Volunteered Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories</td>
<td>(None)</td>
<td>Automated Surveillance, Digital Devices, Sensed Data, Scan data, Interaction data</td>
<td>Transactions, Social Media, Sousveillance (self-tracking), Crowdsourcing, Citizen Science</td>
</tr>
<tr>
<td>Summary &amp; Examples:</td>
<td>Data submitted by individuals to enforced systems of oversight and surveillance which often needs human interpretation. Example: tax information.</td>
<td>Data generated from the use of digital devices; from interactions between people and systems; or measurements from the environment.</td>
<td>Data shared from individuals deliberately, often in exchange for access (quid pro quo) or in support of a common pursuit or goal. Example: Online post-transaction ratings for online reputation building.</td>
</tr>
</tbody>
</table>
Open Data, Open Government, and Open Government Data

Gurin (2013) also helpfully distinguishes big data from three overlapping but separate phenomena: open data, open government, and open government data. (See Figure 1 for a graphical representation of areas of overlap and difference.) In essence: not all open data is from government; big data can be from the government, private sector, non-profits or individuals, and data (big or sampled) can be either open or closed. Finally, not all open government or open access initiatives involve data, big or small. Several governments at all levels have made pledges and committed funds to build systems to make data open and available to citizens and the public for re-use, in the name of supporting civic innovation and the potential benefits associated with such activities. In a way comparable to big data is seen as core to the proposition of smart cities, open government data is seen as the impetus for much of the activity occurring under the banner of “civic technology,” defined as tools developed by collaborations either independently or in collaboration with agencies or governments to support civic engagement, coordination of civic activity, or improved experience in accessing government services. Whether government data is open or not, however, the value of data in the government context is almost universally around lowering costs and providing more efficient service. Michael Flowers, Chief Open Platform Officer and Chief Analytics Officer for the City of New York, exemplifies this in the subtitle of his contribution to a book on open government: “The Data-driven city” (Goldstein et al., 2013: 185).
Open government predates interest in the use of data and is associated with right to information movements, which in many jurisdictions resulted in the creation of access and disclosure legislation, transparency on campaign financing, and reform of government culture towards collaboration and accountability (Fung and Weil, 2010).

Open data, meanwhile, refers to the general trend of organizations (including private corporations and individuals) making datasets publicly available for analysis, and, in the best of cases, supporting protocols that support incorporating this data into applications. In some cases, these applications are often the basis of profit generation and new businesses (O’Reilly, 2010).
Most pertinent to this project’s discussion of ethics is the potential incorporation of civic technology into planning initiatives. Civic technology groups often encourage technology-savvy citizens to collaborate either with government employees or other citizens to use technology in support of broader civic initiatives. Tools such as GitHub allow individuals to create and contribute to developing tools in collaboration with each other, non-profit service providers, advocacy groups, or government staff (Mergel, 2015). Initiatives such as Code for America partner with local governments to embed fellows for an extended period of time into the local government context, with the aim of identifying issues and opportunities to improve experience or access for citizens through building technology that is later made freely available for other governments and individuals to re-purpose. It has inspired similar programs to develop internationally (under the name Code For All®).

An alternate model can be found in the work of the Smart Chicago Collaborative. Originally convened as a result of conversations about improving technology skills and ensuring Internet access for all residents, in 2012, it became a key contributor to the City of Chicago’s efforts with open data (Thornton, 2013). Since then, it has served as a model for civic innovation and collaboration between the City of Chicago (securing grants for the group’s operations) and technology-savvy residents, serving as an intermediary for engaging residents more generally with the aid of technology. The group is also a partner in the City of Chicago’s digital strategy, known as the Chicago Tech Plan, and is a participant in a slate of funded projects, ranging from open source software for working with and analyzing GIS data, to smart health centres, and youth and community engagement through asset mapping (2016, Smart Chicago Collaborative).
Planning Ethics for Big Data in Smart Cities

2.4. Ethics and Big Data

The computerization of a large segment of activities and services (Kitchin, 2013) and increased storage capabilities which have given rise to big data, argues Zwitter (2014), may demand some reconsideration of existing approaches to professional ethics, policy-making, and research. Owing to the fact that this area of practice is new and unfamiliar to many planners and there may be skepticism to the relevance of this topic to planning practice, this section steps through in detail the concepts and arguments from Zwitter's analysis on the ethics of Big data. These concepts and arguments are crucial in building an understanding of how planners might encounter these issues in their day-to-day work, how it relates to aspirations for planning as described in the Code of Ethics, and forms a key element of proposed training material for AICP.

Zwitter starts by identifying four qualities of big data that are ethically relevant: 1) that big data refers to datasets of a size that eclipses anything in human history; 2) that for big data which capture with human activity, behaviour or characteristics, datasets are comprehensive in their measurements so as to make the data organic, allowing us to digitally represent the "messiness" of reality in ways that were previously impossible; 3) that in some cases (such as those related to Internet services) Big data is global; and 4) that analytic practices for big data tend to emphasize correlation over causation.

Zwitter builds on this by then defining three broad categories of stakeholders in big data: big data generators, big data collectors, and big data utilizers. Big data collectors oversee questions such as what activity is captured into data, how much it is stored and for how long. Meanwhile, big data utilizers determine what kind of value can be extracted from the dataset on the "utility production side." More precisely,
Planning Ethics for Big Data in Smart Cities

While [big data collectors] might collect data with or without a certain purpose, [Big data utilizers] (re-)defines the purpose for which data is used, for example regarding:

Determining behaviour by imposing new rules on audiences or manipulating social processes;
Creating innovation and knowledge through bringing together new datasets, thereby achieving a competitive advantage. (Zwitter, 2014: 3)

Big data generators can be understood as one of three types: natural actors (producing data via input or recording, purposefully and deliberately, or not); artificial actors (creating data as the byproduct of performing a task or function, such as the data collected in electronic fare cards for public transit); and physical phenomena, which generate data or are measured in a manner that produce a massive data flow.

With these defined, we can now highlight the core of Zwitter's ethical issues with the aforementioned four qualities of Big data:

(1) and (2) - data has become a de facto universal by-product for participating in any activity as a citizen or participant in the economy as a producer or consumer. As Kitchin (2013) identifies, a significant amount of data is created through automated functions as individuals interact with systems. Data generators are, Zwitter explains, at a disadvantage by virtue of their inability to exercise the ability to either opt-in or opt-out of data-creating systems as desired without imposing significant hardship or inconvenience. Furthermore, there is currently little if any mechanism to choose for their data not to be used downstream by collectors and utilizers. Consenting to data collection, its storage in a dataset and future use, whether it be in real-time or in some unspecified time in the future for unknown means, is often a condition of use or participation in a service or product.

(3) Given the increasingly global nature of datasets and the fact that the ability to transform data into useful information or knowledge lies mostly within agencies, corporations
or universities, the power imbalances among the stakeholders or access to analytical capability may become even further exacerbated.

(4) The analytic methods associated with big data tend to seek out correlations rather than causations as part of the inductive approach (Kitchin, 2013). Because these correlations are being generated through the application of analytic methods, they may imply causation where none may actually exist. "We become more vulnerable," Zwitter writes, to having to believe what we see without knowing the underlying whys" (Zwitter, 2014: 3).

Zwitter additionally highlights the importance of knock-on effects, defined as effects on third mostly unrelated parties. As individuals act in ways that represent their networks (social, professional or otherwise) digitally, their capacity to fully comprehend the full repercussions of doing so may be compromised, in light of Big data utilizers acting on new capabilities with gathered Big data in ways unanticipated by the Big data generators. From an ethical standpoint, Zwitter observes, "This changes foundational assumptions about ethical responsibility by changing what power is and the extent we can talk of free will by reducing knowable outcomes of actions, while increasing unintended consequences."

Finally, as Kitchin (2013) highlights, an important pitfall for those working with big data avoid is “data boosterism,” the idea that more data renders all problems solvable. Issues such as the digital divide (lack of Internet access) and the participation divide (exclusion from online participation that yields positive benefits, such as having one’s acknowledged and represented). These considerations are key for ensuring that some thought is given to those who will not or will never engage with tools as others might, and that actions to open up new possibilities with technology do not become new ways to exclude those who do not or cannot use tools as we might expect them to.

Interdisciplinary emerging practice on using big data
Planning Ethics for Big Data in Smart Cities

This section summarizes emerging, alternative approaches to big data, and the extent to which they highlight concerns in existing approaches.

**Legal Perspectives on Privacy**

Discussion in the American legal field on the topic of big data and smart cities has centred on concerns about rights to privacy. Finch and Tene (2013) argue that systems should be designed that would allow for realizing the potential of data in helping us understand cities, while removing the necessity that they are architected to serve (either inadvertently or intentionally) as systems of mass surveillance. Furthermore, they also suggest that these same tools be employed to “watch the watchers” and to protect against the abuse of data gathered for one purpose being applied to another, by building in systems of accountability. Finally, Finch and Tene are in agreement with Wachs (1985) and Townsend (2013) that transparent models and algorithms go a long way to establishing trust that systems do what they are stated to do, and can be independently verified as such.

**Council for Big data, Ethics and Society**

The Council for Big data Ethics and Society provides interdisciplinary critical perspectives on big data. Their activities includes noting research controversies involving big data; gathering cases, facilitating dialogue, and convening a network of scholars interesting in providing a range of perspectives on big data initiatives.

**Urban Informatics and Community Informatics**

The fields of urban informatics and community informatics examine information and computation practices in the urban and community contexts respectively. Urban informatics is concerned with the use of information and ICTs in the urban environment. Urban informatics draws on user experience, information architecture and design methods, to engage
Planning Ethics for Big Data in Smart Cities

residents as actors in urban sustainability systems. Community informatics explores both the opportunities for communities changing and becoming more empowered through technology, as well as the risks for loss of power or dependency.

**Platform Cooperativism**

Platform cooperativism can be understood from two perspectives. On the one hand, it can be seen as a direct response to the popularity of private enterprises such as AirBNB and Uber. These platforms are popular for customers and suppliers, but have also been criticized as using mobile networking capabilities to disrupt existing industries without consideration for impact on labour conditions or wealth distribution (Rogers, 2015). On the other, it can be seen as the application of networking tools to worker and member-owned cooperatives as an organizational model, proposing new relations between consumers, workers and corporations.

In this section, we have established some of the common themes between planning ethics and the concerns around the ethical use of big data. Should planners be involved in big data projects, the hope is that a planner’s commitment to the public interest and pursuit of social justice would improve the implementation of the project as well as ensuring it strives for equity in its outcomes. Similarly, any big data project that might impinge on an individual’s rights should also give any planner participating in the project pause to assess the necessity of the violation in view of the project’s broader pursuits, much as we would expect from any other planning project.

The underlying commonalities between a planner’s existing work and what most big data projects in cities are trying to achieve, mean that for most planners, many of the challenges of collaboration will be similar to those experienced in any cross-functional team made of people with different backgrounds and responsibilities. How this should shape the way AICP engages in members on this topic is the focus of the next section.
Planning Ethics for Big Data in Smart Cities

3. Ethics Training Requirements and Structure

Certification Maintenance (CM) credit providers are given direction on structuring training sessions eligible for ethics CM credits; a summary of the guidance is provided in Table 2.3.

<table>
<thead>
<tr>
<th>Table 2.3. Guidance for ethics training sessions. (Adapted from “Information for Certification Maintenance Providers”, American Planning Association, n.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Activities offering CM ethics credit must focus on training planners on the standards of ethical behaviour according to the AICP Code of Ethics and Professional Conduct.</td>
</tr>
<tr>
<td>• Sessions focusing on the aspirational principles (Section A) or other parts of the code are permitted.</td>
</tr>
<tr>
<td>• Sessions are expected to have “a significant focus on relevant examples of ethical behavior, based on the principles described in the Code of Ethics.”</td>
</tr>
<tr>
<td>• The intent is for ethics sessions to “elicit self-reflection from participants and prompt them to consider how they might react to a situation or scenario. “[…T]he most effective ethics sessions challenge participants to view a situation from a variety of perspectives, taking into consideration several variables.”</td>
</tr>
<tr>
<td>• Ethics training for elected or appointed officials is not eligible.</td>
</tr>
</tbody>
</table>

Currently, APA maintains an online database of all CM-eligible courses dating back two years. A significant portion of ethics sessions have titles indicating that the sessions’ primary focus is on specialized planning competencies (for example, topics within transportation planning). Given the wide breadth of areas where big data can feasibly be applied, framing the ethics of big data as an extension of best practice in planning specialties and sub-topics, rather than its own phenomenon, is more likely to meaningfully connect with individual planners’ interests and everyday work.
3. Discussion

While planners involvement has generally not been featured in the marketing slogans promoting big data and smart cities, as the Background section illustrated, much of planners’ work has been in addressing the very same challenges that big data and smart cities are currently tackling using new methods. Townsend (2013) has similarly argued that planning as a profession, and planners as practitioners, are uniquely qualified to contribute to this field of emerging practice, to ensure that automated systems in cities do not come at the expense of its serving the needs of its inhabitants, by virtue of being trained to balance values and concerns of diverse stakeholders, with complex resource and technical limitations.

In the absence of drawing on the experience of a planning practitioner who worked on a big data project to lay the foundation of a case to explore through narrative in an ethics training session, this section extrapolates two potential challenges based on the discussion of planning and big data from the background.

3.1. Negotiating frames between Planning and Data Science

As Innes and Booher (2010) state, drawing on their engagements in collaborative planning, all information is understood through frames. While many myths abound about the neutrality and objectivity of big data, its collection is always shaped by assumptions and value judgments about what part of an action, interaction, behaviour or event matters enough to be measured, captured or otherwise reflected in data. Even big data techniques that seek to identify correlations without causations simply through identifying patterns in data alone, without any guidance from a formal theory, analytics must still be interpreted within a context. Whether what matters about a place, a context or a community is effectively captured in that which has been measured will ultimately determine the kinds of questions that can be answered by the data, as well as enabling or constraining the depth of the actions that can be
taken based on those answers. Kitchin (2013) notes, “what is really needed is for data
scientists and domain experts to work with each other to ensure that the data analytics used
make sense and that the results from such analytics are sensibly and contextually interpreted.”

3.2. Smart City Governance

Some scholars researching smart cities has started to explore the question of what kind of
governance is required for them to thrive (Deakin, 2014) — particularly in light of the lack of
emphasis given to the social and cultural features that are key to their success by proponents,
who focus primarily on hardware and technical requisites. This persists despite the fact that
most visions of smart cities include the concept of “smart citizens,” who will almost assuredly
want not only to access timely and effective government services, but also participate in
governance using technology. We might expect that healthy governance will include
mechanisms for citizens, professionals and scholars to enjoy the convenience enabled by the
strengths and advantages of big data, linked and driving automated actions, while remaining
confident in the protections in place to keep users of our data respectful of our rights, wishes,
values and expectations as citizens.

The ethics training that this project supports should be aimed at ensuring planners can act
as advocates in this regard, serving and representing the public interest at the design table in
concert with others as the governance system emerge. Planners may also be in the position of
advocating that the ethical standards governing the work of data scientists (the emerging
profession for professionals working with big data) will be at least equal, if not higher than,
the standards to which planners or other similar professions are currently held.
4. Recommendations

As discussed in the previous section, ethics credits are often made available as part of sessions focused on specific planning specialties. Connecting ethics training in this way can be seen as complementary for disseminating knowledge about specific applications of big data alongside ensuring participants are made aware of ethical concerns in using big data. Two sets of recommendations are presented here. The first set outlines highest level, generic guidance for incorporating big data into planning processes. It is intended to be adapted for specialized sub-topic training sessions, though it could also be presented as-is to prospective ethics training session leaders. The second set of recommendations can be seen as general recommendations for APA to participate in the broader discourse around the societal impact of big data on society, and to advocate for planners’ continued participation in shaping smart cities practice.

4.1 Recommendations for Ethics Training on Big data For Smart Cities

1. Be upfront in addressing the limitations of data in framing how to interpret indicators in response to actions. In much the same way Wachs (1985) emphasized the importance of acknowledging assumptions for forecasting, the limitations of what big data can tell us about any given situation should be kept front of mind. Should planners be working in collaboration with professionals using a different frame of reference, these should be addressed and weighed against the risk of acting on inaccurate conclusions.

2. Keep in mind technology’s structuring effects, which can act in opposition to our requirement to pursue social justice. As Pitkin (2001) argues, our optimism towards what technology can enhance about our systems must be tempered with realism about
Planning Ethics for Big Data in Smart Cities

its limitations. Technology and tools should be implemented towards an articulated end for our clients or for the public, rather than solely for its own sake.

3. Consider the benefits of interdisciplinary approaches for information gathering in design processes for creating usable and supportive experiences incorporating both virtual (information) and physical interactions. The contribution of ethnography as part of design research, in particular, can bridge the gap between systems addressing utility value that also prioritize inclusive interaction (Potts et al, 2015).

4. Frame carefully any insights obtained from data that is being used far outside the context in which it was collected. Keeping in mind the significant distance between data users and data generators, as well as the positioning of data collectors, take the time to state up front any steps taken to ensure anonymity and privacy, as well as obfuscation of precise details (for example, in geolocation analysis) past what’s necessary for the purposes of analysis.

5. If working in the public sector, consider in-house technology capabilities and collaboration as alternative routes to meeting technology needs. Identify individuals for nurturing civic technology assets, and opportunities to build support within governments amongst staff and elected or appointed officials.

6. Ensure that you coordinate with communications teams running social media accounts in your organization if you are collaborating in projects. In this context, using social media can also become modeling the relationship of joint problem solving, which may deviate from existing branding goals. Where possible, ensure there is a mechanism for treating social media as a means of dialogue, and a way to listen and learn from the public (collaborative planning), as part of a broader project to deepen the public’s understanding for the tasks and goals of planners.
4.2 Recommendations for supporting planning perspective in big data ethics discourse

1. Encourage AICP or another partner within APA to create a generic big data ethics training module (with CM credits if possible), and to make it available free of charge for APA members and non-members as an online resource. This is anticipated to have two benefits: on the one hand, it can have a greater impact by ensuring all planners, not just members of AICP, can learn about the potential and risks in projects using big data; and on the other, it unambiguously shows, both to membership as well as colleagues and members of the public, what the APA’s position is on the application of the code of ethics to big data. (APA’s Communication Guide for Planners may serve as an effective model.)

2. Identify an individual or position within the APA to serve as a participant or observer of the Council for Big Data Ethics and Society, in order to continuously monitor the state of practice, and who can report this to APA members on a regular basis. This person could report to the Smart Cities and Sustainability Initiative, in order to identify concerns, which are most directly relevant to planning practice.

3. Identify ways for planners to share and flag topics and issues involving big data for which analysis or discussion of the planning perspective would be of benefit. The Smart City Innovation Portal can serve as an initial venue, with APA’s other communication methods (regular e-mails, website) can be used for disseminating the final outcomes.

4. Walk the talk by incorporating analytics and big data were possible into member engagement, in order to model the ways in which it supports interactions. -- Continue to support AICP members getting ethics credits as part of topic-specific courses.


6. Conclusion

Interdisciplinary collaborations lie at the heart of the successful smart cities shaped by thoughtful and effective use of big data, just as they have been key to effective and equitable places in communities and cities. The data revolution, as Kitchin (2013) refers to it, opens up many doors — but planners are also obligated to better understand who will not be able to participate in it, and to be thoughtful in offering alternatives without deepening existing inequalities or inadvertently putting up new, and potentially less visible, barriers. This project has delved into the ethical aspirations and obligations of planning, attempting to meet in the middle with potential offered by big data for better managing resources to enhance quality of life in urban environments. Successful interdisciplinary collaborative practice for using big data will come from being able to work through the inevitable tensions underpinning from different sets of assumptions, in order to create experiences that meaningfully improve upon the status quo through thoughtful interventions in spaces and services.

Bibliography


Planning Ethics for Big Data in Smart Cities


Planning Ethics for Big Data in Smart Cities


Appendices

Appendix A. APA SCTF Recommendations

This is an excerpt from the APA Smart Cities Task Force Report and Recommendations, Conclusions and Next Steps, as obtained from the APA Smart Cities Initiative website (https://www.planning.org/sustainingplaces/smartcities/).

The Smart Cities and Sustainability Task Force has listened to the planning community, has reviewed the information related to Smart Cities, and has condensed this information into components relevant to planners. This work has set the foundation for APA to strategically focus on specific initiatives that will be of the highest value for its members.

The task force recommends several actions be taken by APA over the next year. They are as follows:

To add value to members’ planning practice it is recommended APA:

1. Invest in developing the Smart Cities Innovation Portal to create a robust catalogue of great ideas and applications of technology to improve cities’ efficiency and/or quality of life. Planners implementing these powerful applications could add significant value to their role in communities.
2. Develop Comprehensive Plan Smart City Guidelines for Land Use, Transportation, & Economic Development. To make a community “smarter” and get the most value out of technology, prioritizing technology investments based on established and overarching community goals is very important. Many comprehensive plans in communities focus on making sure technology and infrastructure is adequate, but what should also be addressed are how the key investments in technology better position a community to achieve their long-term goals, such as improving quality of life and competing in the global economy.
3. Partner with Universities, Businesses, & Other Groups to Research Reports on Key Technologies. Individuals and communities can sometimes be enticed by the latest gadget or tool as part of competitive planning efforts. APA and research partners could provide objective information on what technologies will stand the test of time for smart investment.

Priorities for Study:
- Communications infrastructure and processes needed for communities to compete in the global economy.
- Using technology to enhance performance of buildings and streets for energy savings, green infrastructure/water management, and infrastructure maintenance.
- The role/impacts of new spaces where people work in a mobile society.
- Optimizing new transportation choices for communities and its impacts for street operations, design, and parking.
To educate planners regarding smart cities it is recommended that APA:

4. Offer Expanded Technology Updates at the National Planning Conference. APA does regularly feature technology presentations and trainings at the annual conference. This recommendation is focused on expanding how technology is presented. The Seattle conference will include a Technology Zone. Features that are more demonstration-based and hands-on could create a new educational experience for planners at the conference. Examples of technologies to feature could include automated cars (such as the Google car) or smart home exhibits.

5. Work with AICP on integrating technology systems training into broader planning education. If planners are to help lead smart city initiatives in their communities, they will need to apply the lessons within this white paper and understand the basic core technologies and systems driving change as part of their basic planning degree and continuing education.

To provide leadership regarding smart cities it is recommended that APA:

6. Create a new Divisions Council Initiative for Smart Cities. Three APA divisions have collaborated on this task force to begin these planning efforts. At the 2014 Fall Leadership Conference other divisions expressed interest in joining the Smart Cities Initiative. The task force recommends further leadership for the Smart Cities work should continue and be led by a cross-pollinating team of the organization’s subject matter efforts in the Divisions Council as a recognized new Divisions Council Initiative.

7. Offer ethics training related to big data. Ethics training is a fundamental part of AICP’s continuing education requirements as planners. Ethics concerns related to big data would be a timely topic to consider for targeted ethics training by APA.

8. Advocate for policies that bridge the digital divide. Part of our role as planners is to not only serve our elected officials or clients but to advocate for the common good and broader public. The digital divide contributes substantially to inequity in our communities and creates an uneven playing field for citizens striving to better their lives and contribute to their communities. APA should have strong advocacy positions on correcting these inequities.
Appendix B. AICP Code of Ethics and Professional Conduct

Adopted March 19, 2005
Effective June 1, 2005
Revised October 3, 2009

(The Executive Director of APA/AICP is the Ethics Officer as referenced in the following.)

We, professional planners, who are members of the American Institute of Certified Planners, subscribe to our Institute's Code of Ethics and Professional Conduct. Our Code is divided into four sections:

Section A contains a statement of aspirational principles that constitute the ideals to which we are committed. We shall strive to act in accordance with our stated principles. However, an allegation that we failed to achieve our aspirational principles cannot be the subject of a misconduct charge or be a cause for disciplinary action.

Section B contains rules of conduct to which we are held accountable. If we violate any of these rules, we can be the object of a charge of misconduct and shall have the responsibility of responding to and cooperating with the investigation and enforcement procedures. If we are found to be blameworthy by the AICP Ethics Committee, we shall be subject to the imposition of sanctions that may include loss of our certification.

[...] The principles to which we subscribe in Sections A and B of the Code derive from the special responsibility of our profession to serve the public interest with compassion for the welfare of all people and, as professionals, to our obligation to act with high integrity.

As the basic values of society can come into competition with each other, so can the aspirational principles we espouse under this Code. An ethical judgment often requires a conscientious balancing, based on the facts and context of a particular situation and on the precepts of the entire Code.

As Certified Planners, all of us are also members of the American Planning Association and share in the goal of building better, more inclusive communities. We want the public to be aware of the principles by which we practice our profession in the quest of that goal. We sincerely hope that the public will respect the commitments we make to our employers and clients, our fellow professionals, and all other persons whose interests we affect.

A: Principles to Which We Aspire

1. Our Overall Responsibility to the Public

Our primary obligation is to serve the public interest and we, therefore, owe our allegiance to a conscientiously attained concept of the public interest that is formulated through continuous and open debate. We shall achieve high standards of professional integrity,
proficiency, and knowledge. To comply with our obligation to the public, we aspire to the following principles:

a) We shall always be conscious of the rights of others.

b) We shall have special concern for the long-range consequences of present actions.

c) We shall pay special attention to the interrelatedness of decisions.

d) We shall provide timely, adequate, clear, and accurate information on planning issues to all affected persons and to governmental decision makers.

e) We shall give people the opportunity to have a meaningful impact on the development of plans and programs that may affect them. Participation should be broad enough to include those who lack formal organization or influence.

f) We shall seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration. We shall urge the alteration of policies, institutions, and decisions that oppose such needs.

g) We shall promote excellence of design and endeavor to conserve and preserve the integrity and heritage of the natural and built environment.

h) We shall deal fairly with all participants in the planning process. Those of us who are public officials or employees shall also deal evenhandedly with all planning process participants.

2. Our Responsibility to Our Clients and Employers

We owe diligent, creative, and competent performance of the work we do in pursuit of our client or employer's interest. Such performance, however, shall always be consistent with our faithful service to the public interest.

a) We shall exercise independent professional judgment on behalf of our clients and employers.

b) We shall accept the decisions of our client or employer concerning the objectives and nature of the professional services we perform unless the course of action is illegal or plainly inconsistent with our primary obligation to the public interest.

c) We shall avoid a conflict of interest or even the appearance of a conflict of interest in accepting assignments from clients or employers.

3. Our Responsibility to Our Profession and Colleagues

We shall contribute to the development of, and respect for, our profession by improving knowledge and techniques, making work relevant to solutions of community problems, and increasing public understanding of planning activities.

a) We shall protect and enhance the integrity of our profession.

b) We shall educate the public about planning issues and their relevance to our everyday lives.

c) We shall describe and comment on the work and views of other professionals in a fair and professional manner.
d) We shall share the results of experience and research that contribute to the body of planning knowledge.

e) We shall examine the applicability of planning theories, methods, research and practice and standards to the facts and analysis of each particular situation and shall not accept the applicability of a customary solution without first establishing its appropriateness to the situation.

f) We shall contribute time and resources to the professional development of students, interns, beginning professionals, and other colleagues.

g) We shall increase the opportunities for members of underrepresented groups to become professional planners and help them advance in the profession.

h) We shall continue to enhance our professional education and training.

i) We shall systematically and critically analyze ethical issues in the practice of planning.

j) We shall contribute time and effort to groups lacking in adequate planning resources and to voluntary professional activities.

B: Our Rules of Conduct

We adhere to the following Rules of Conduct, and we understand that our Institute will enforce compliance with them. If we fail to adhere to these Rules, we could receive sanctions, the ultimate being the loss of our certification:

1. We shall not deliberately or with reckless indifference fail to provide adequate, timely, clear and accurate information on planning issues.

2. We shall not accept an assignment from a client or employer when the services to be performed involve conduct that we know to be illegal or in violation of these rules.

3. We shall not accept an assignment from a client or employer to publicly advocate a position on a planning issue that is indistinguishably adverse to a position we publicly advocated for a previous client or employer within the past three years unless (1) we determine in good faith after consultation with other qualified professionals that our change of position will not cause present detriment to our previous client or employer, and (2) we make full written disclosure of the conflict to our current client or employer and receive written permission to proceed with the assignment.

4. We shall not, as salaried employees, undertake other employment in planning or a related profession, whether or not for pay, without having made full written disclosure to the employer who furnishes our salary and having received subsequent written permission to undertake additional employment, unless our employer has a written policy which expressly dispenses with a need to obtain such consent.

5. We shall not, as public officials or employees, accept from anyone other than our public employer any compensation, commission, rebate, or other advantage that may be perceived as related to our public office or employment.
6. We shall not perform work on a project for a client or employer if, in addition to the agreed upon compensation from our client or employer, there is a possibility for direct personal or financial gain to us, our family members, or persons living in our household, unless our client or employer, after full written disclosure from us, consents in writing to the arrangement.

7. We shall not use to our personal advantage, nor that of a subsequent client or employer, information gained in a professional relationship that the client or employer has requested be held inviolate or that we should recognize as confidential because its disclosure could result in embarrassment or other detriment to the client or employer.

Nor shall we disclose such confidential information except when (1) required by process of law, or (2) required to prevent a clear violation of law, or (3) required to prevent a substantial injury to the public. Disclosure pursuant to (2) and (3) shall not be made until after we have verified the facts and issues involved and, when practicable, exhausted efforts to obtain reconsideration of the matter and have sought separate opinions on the issue from other qualified professionals employed by our client or employer.

8. We shall not, as public officials or employees, engage in private communications with planning process participants if the discussions relate to a matter over which we have authority to make a binding, final determination if such private communications are prohibited by law or by agency rules, procedures, or custom.

9. We shall not engage in private discussions with decision makers in the planning process in any manner prohibited by law or by agency rules, procedures, or custom.

10. We shall neither deliberately, nor with reckless indifference, misrepresent the qualifications, views and findings of other professionals.

11. We shall not solicit prospective clients or employment through use of false or misleading claims, harassment, or duress.

12. We shall not misstate our education, experience, training, or any other facts which are relevant to our professional qualifications.

13. We shall not sell, or offer to sell, services by stating or implying an ability to influence decisions by improper means.

14. We shall not use the power of any office to seek or obtain a special advantage that is not a matter of public knowledge or is not in the public interest.

15. We shall not accept work beyond our professional competence unless the client or employer understands and agrees that such work will be performed by another professional competent to perform the work and acceptable to the client or employer.

16. We shall not accept work for a fee, or pro bono, that we know cannot be performed with the promptness required by the prospective client, or that is required by the circumstances of the assignment.

17. We shall not use the product of others’ efforts to seek professional recognition or acclaim intended for producers of original work.

18. We shall not direct or coerce other professionals to make analyses or reach findings not supported by available evidence.
19. We shall not fail to disclose the interests of our client or employer when participating in the planning process. Nor shall we participate in an effort to conceal the true interests of our client or employer.

20. We shall not unlawfully discriminate against another person.

21. We shall not withhold cooperation or information from the AICP Ethics Officer or the AICP Ethics Committee if a charge of ethical misconduct has been filed against us.

22. We shall not retaliate or threaten retaliation against a person who has filed a charge of ethical misconduct against us or another planner, or who is cooperating in the Ethics Officer's investigation of an ethics charge.

23. We shall not use the threat of filing an ethics charge in order to gain, or attempt to gain, an advantage in dealings with another planner.

24. We shall not file a frivolous charge of ethical misconduct against another planner.

25. We shall neither deliberately, nor with reckless indifference, commit any wrongful act, whether or not specified in the Rules of Conduct, that reflects adversely on our professional fitness.

26. We shall not fail to immediately notify the Ethics Officer by both receipted Certified and Regular First Class Mail if we are convicted of a "serious crime" as defined in Section D of the Code; nor immediately following such conviction shall we represent ourselves as Certified Planners or Members of AICP until our membership is reinstated by the AICP Ethics Committee pursuant to the procedures in Section D of the Code.