CHAPTER 11

Leadership Practices in Foresight City

THE COST OF NOT EXERCISING FORESIGHT

Stories, irrespective of whether they are from old or from new, can help us burn in our mind unforgettable lessons. Sometimes we do not understand their message and other times we do. Regardless, the wisdom of these stories tends to appear at the right times in our lives. One of those stories was the story about a King named Hezekiah. As I think about his story, I remember sitting in the circle of family members (old and young) listening. What is striking to me is how much this ancient story speaks to the consequences of attempting to lead without foresight. Here is a condensed version of it.

Historians speak of a great king named Hezekiah. They believed his reign happened between the years 715–687 B.C in the Kingdom of Judah (Halley, 2007; Walton, Matthews, & Chavalas, 2000). Hezekiah reigned for 29 years bringing tremendous transformation to the kingdom. He was not only described as a good king, but also a great administrator and a dominant technological innovation force of his time. He fortified the walls of Jerusalem, built a water tunnel to bring water into the city (the remains of which are still visible today), and made great military preparations leading him to gain independence from the ruthless and all-powerful Assyrian Empire. However, he grew careless and only concerned with his name and, as we would say in modern times, his term in office.
One day, an envoy from a distant land came to visit him. Proud of his treasures and what he had built, Hezekiah showed this envoy his city in every detail. There was not a place or hidden corner the king did not proudly show to this far-landed envoy. When his most trusted advisor (a prophet) inquired of the king as to who these people were and from where they came, King Hezekiah replied that this envoy was from a faraway land—Babylon. His trusted advisor pronounced the day would come when all the king’s possessions, children, and wives would be carried to Babylon and his people would serve as slaves. But all Hezekiah could think of was the wish granted to him when he was healed from illness and allowed to live for 15 more years. He thought, “Will there not be peace and security in my lifetime?” (2 Kings 20: 13–17, New International Version). History showed this to be true. Hezekiah’s people enjoyed peace during his time, but then they suffered dearly. The Babylonian Empire conquered the Kingdom of Judah about 55 years later, and the people of Judah lived in exile and as slaves for more than 50 years (Halley, 2007; Walton et al., 2000).

As unfortunate as this story is, it repeats itself throughout time, disguised in many forms all over the world, and yes, in industrialized, high-tech, advanced societies, as well as emerging ones. Some recent examples remind us of the consequences of acting without foresight. The humanitarian crisis in the Island of Puerto Rico, especially after Hurricane Maria in September 2017, is one instance. The lack of investment in human capital, renewal of physical infrastructure, poor administration and stewardship of resources, as well as failed economic action over the years before Hurricane Maria devastated the island created the bleak situation the island and the world see today—massive exodus, poverty, failing infrastructure, and a government citizens cannot depend on because it has reached all the characteristics of failed-state chaos (Brown, 2017; Cabán, 2018; Hernandez, 2018; Sutter & Hernandez, 2018). One can think of another example where lack of foresight was also devastating: The ransomware attack on the city of Atlanta, Georgia on March 22, 2018. Although cyber-attacks are not new to the world and have happened in the past to other cities and countries as in attacks on the power grid in Ukraine in 2015, the municipal railway of San Francisco in 2016, and the transportation administration systems of Sweden in 2017 (Cerrudo, 2018; Zetter, 2016), the case of Atlanta distinctively highlight several failures in foresight. For example, the attack crippled the city resulting in damage estimates of over $17 million dollars; some damages were termed
irreparable (Olenick, 2018; Schwartz, 2018). City officials highlighted, as they were struggling with bringing critical municipal systems back online, they wanted to “use the experience as an opportunity to become a ‘model city’ for how municipalities can protect against and prepare for cyber-attacks” (Wray, 2018, para. 13). The statement leads one to wish the example of thinking through the realm of possibilities and preparing for different scenarios would have been a better example to make. Among the lessons learned, city officials also highlighted the lack of understanding and struggle through manual procedures and system interdependencies, all of which became evident once computer systems became crippled after the ransomware attack (Hutcherson, 2018; Wray, 2018). Unfortunately, this is not typical of just the city of Atlanta. It is typical of most cities and many organizations because they believe automation makes them more efficient; this thought is false without analysis, mapping, and the making of processes as humanly efficient as possible, first, before injecting automation. These unfortunate situations are examples of what Greenleaf (2002) noted as the failure to foresee today’s events in the past—to exercise foresight and take the right actions when there was freedom of initiative to act. The good thing is we can exercise foresight and identify better choices ahead.

**Practicing Leadership in Foresight City**

The previous chapter discussed Foresight City. Recalling that discussion, we noted Foresight city is not a badge. It is the metaphor representing the gamut of humanity, the space where the current generation, the emerging generation, and the future generation can join together and coexist as brothers and sisters responsible and accountable to one another. The citizens gave the city its name because of how they collectively think. In short, they think and act collectively different in two significant ways. First, they have a sense for the connectedness of all things. Secondly, they exercise three forms of thinking which shape their collective future consciousness and their actions in the city. The first form of thinking answers the question: “How did we get here?” Answering this question deals with an understanding of root-beliefs to transcend the recent and to inquire and challenge assumptions about the present era. The second form of thinking is to enquire about others and seek multiple perspectives to reduce hidden and blind spots and make the myriad futures public (using the Future Awareness Inquiry Tool). And in the third form
of thinking, the citizens of Foresight City are able to bring the future from its far, perhaps microscopic, dimension on to the near horizon, so it can be scrutinized and studied. The citizens do this through the exercise of two leadership intelligences (seeking a sense for the unknowable and foreseeing the unforeseeable).

These forms of thinking lead to ways of acting in Foresight City. These ways of acting give birth to leadership foresight practices which are intertwined and cannot be separated from the preceding discussion about forms of thinking. The forms of thinking and the leadership foresight practices are interwoven. Without deep thinking, leadership solutions may only, at best, treat symptoms, creating the re-occurrence of problems, lack of progress, and frustration from those involved. Both the forms of thinking in Foresight City and the leadership foresight practices create an inclination toward foresight culture for the city and the citizens as their way of life. This is how leaders and citizens become architects of culture—culture being the product of a collection of people’s inner thoughts and outward expressions (LugoSantiago, 2017); in the case of Foresight City, this is how foresight culture is practiced and expressed (through the forms of thinking and the nine leadership foresight practices). The forms of thinking and the leadership foresight practices become mutually reinforcing. By practicing the forms of thinking, the leader gains depth in reasoning and draws from multiple frames of reference. And by applying the leadership foresight practices, the leader gains wisdom. Here is where the leader clarifies, validates, and/or discovers to what extent innovation and creativity must be mobilized to make way to a more precise roadmap to future outcomes. The leader is then sharpened, more able to foresee, and more able to act.

The forms of thinking were discussed previously. We will next discuss nine leadership foresight practices of Foresight City. These practices are contained within three domains held together by a sustainment band. Table 11.1 depicts these leadership practices (P1–P9) within their domains (1st to 3rd).

Seldom do linear solutions lead to effective, long-term solutions. This is the reason the nine leadership practices are depicted in Fig. 11.1 as a system of leadership thinking, anticipating, and action-shaping, embedded in three domains which are constantly being refreshed by a foresight sustainment band. This robust system has as objective the function of magnifying the view of the future while frequently renewing the foresight eye into the horizon, so the leader can gain a sense for the unknown
Table 11.1 Nine leadership foresight practices and sustainment band in foresight city

| 1st Domain: Understanding Past, present, & future | 2nd Domain: Anticipating Sense, design, & co-create | 3rd Domain: Shaping the future Action, culture, discourse | Sustainment band |
|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|------------------|
| P1. Question assumptions about present, past, and future | P4. Scan the horizons for emerging futures | P7. Take action in sync with design and strategy | Seek Multiple Perspectives+Scan Continuously |
| P2. Think holistically, multi-layered, and multi-generational | P5. Design futures (for humans with humans) | P8. Discourse—Do not just think about the future, talk about the future | |
| P3. Map the culture and map the system | P6. Co-create strategy | P9. Monitor and scan to see signposts of preferred future | |

Source Author’s conception of foresight practice into domains, practices, and sustainment band

Fig. 11.1 Leadership practices in foresight city (Source Author’s creation. Note A generic model for leadership foresight practice. Foresight practice is divided into three main intertwined domains [understanding, anticipating, and shaping the future]. Within the three domains, nine leadership foresight practices exist. The domains are being constantly refreshed by two elements [seek multiple perspectives and scan continuously] acting as the sustainment band of effective foresight practice)
and the emerging. Why is this important? Scholars tell us the mental frameworks we have constructed to cognitively process information about the world around us can compress our ability to see critical information on the horizon (Gordon, 2009). Therefore, the renewal of the foresight eye into the horizon is a necessity, not only to reconstruct the meaning of those events and trends we see on the horizon as they move in the time continuum, but also to serve as an intelligence warning system. As its name implies, the intelligence warning system alerts the leader about impending changes or emerging activity in the environment, so these changes or emerging activity can be examined against assumptions originally made and the knowledge previously acquired about the future which was once explored. Let us look in more detail.

For ease of explanation, we will explore these practices by domain first (understanding, anticipating, and shaping the future), and lastly, we will examine the components of the sustainment band (seek multiple perspectives and scan continuously). It is also important to note that although the following discussion will present an introduction to the model for leadership foresight, the insight will improve the leader’s quality of thinking, capacity for reflection and learning, and strategic future-oriented action in the complex city environment (or any other volatile, uncertain, complex, and ambiguous environment) in which the leader may be operating.

**The First Domain: Understanding**

The first domain is intimately associated with the first form of thinking in Foresight City (previously discussed). If you recall, that process started with asking ourselves: “How did we get here?” This domain includes the process of achieving understanding about how the past was formed, how that past relates to our present conditions, and how elements of the past and the present can combine to form the future. Another way to think about this domain is to think about this domain as achieving strategic awareness. In the planning and strategy field, many have studied the legendary writings of Sun Tzu, who was believed to have written his *Art of War* around 400 B.C. In it, he delineated early military doctrine about when to attack and when not to attack, how the conditions of the terrain favor or disadvantage military forces, as well as assessing the morale and fitness of the troops (Sawyer, 1994). This was the process of gaining critical situational awareness, so deductions could be made about who would win or lose in battle. In modern times, we have expanded our view...
of situational awareness with the advent of space systems. For example, the United States acquires space situational awareness through the integration of space surveillance, collection, and processing; the status of U.S. and allied satellite systems; understanding of U.S. and multinational space readiness; and analysis of other space domains (U.S. Department of Defense, Joint Chiefs of Staff, 2018). In business, the basic strategy-formulation process has taught us we should look at internal conditions of the organization, compare them to the external conditions of the organization in order to inventory key core competencies and success factors (Mintzberg, Ahlstrand, & Lampel, 1998). But the deficiency of these processes is they focus on the now. This knowledge is insufficient in Foresight City because, without understanding the evolutions, revolutions, and still-emerging phenomena, we cannot really gain critical strategic awareness about how we got where we are. We only know perhaps one-fourth of what we need to know to have a good assessment of the real field conditions. Foresight must look much deeper.

Achieving understanding, therefore, means we are required to critically question our assumptions (core beliefs and motivations) about the past, think holistically about the present (multi-generational and multi-layered), and be able to map both the prevailing system and culture accentuating the status quo. Let us dive deeper into this first domain (Understanding) by exploring the first leadership foresight practice contained in it. This is the leadership foresight practice of questioning our assumptions about the past, present, and future.

In regard to critically questioning our assumptions (the first leadership foresight practice), certain areas of study are necessary. One good place to start is to research key milestones in the last 50–100 years. Who were the city’s heroes in the past? What were they celebrated for? What major political changes, ideologies, revolutions, and technologies shaped the ways society sees itself today? Can we still see the signs of those revolutions in the people, the walls of the city, the layout of the streets, and the parks? When one goes out to the people and asks them about what they enjoy the most about the city, what do they highlight? If one goes out and asks people to think about things which have disappeared, is there some key element most people mention as a characteristic or feature they miss the most? As we explore those areas, other areas are also critical. Specifically, what changed? And what did not change? Can we explain the forces which made change happen? And what forces, mechanisms, dogmas, or movements kept things from changing? The collection
of these answers can begin to give us an idea of the inventory of core beliefs and motivations to compare against our preconceived assumptions of the past before attempting to change the future. The City of Ghent in Belgium and the City of Barcelona in Spain were successful cases of future change, in part, because this process of questioning, observing, and understanding the core beliefs and motivations of citizens became central to their chosen pathway to the future. Ghent had an economy defined by an industrial port activity and an entrepreneurial activity near its city center, making citizens unsurprisingly choose environment, social, and human capital investments as their natural pathway to the city of the future (Van den Bergh & Viaenea, 2016). In a similar manner, when one looks at Barcelona, its social collaboration and association movements have been rooted in a historical Catalan tradition, where spaces for meeting and socializing are important facets of cultural identification and life; consequently, the citizens were a natural fit to the collaboration and participation requirements that were needed in the adoption of technology that made the city such an icon of smart city success (Capdevila & Zarlenga, 2015). As seen, the collection of those answers can help us piece together disparate fragments and think holistically about Foresight City.

Thinking holistically, the second leadership foresight practice, is about exercising critical thinking that breaks free from paradigms and frames of mind which have been molded by the present-day headlines and/or popular narratives dominating the airwaves. One of those headlines shaping our thinking (consciously or unconsciously) is the narrative about the pace of change. For over 20 years, the narrative has been describing the pace of change as exponential, accelerating, and transforming everything. Technology has been the major culprit, at least this is the popular narrative. When one reads the headlines about technology, the same narrative is described: exponential, transformational, changing everything. Although there may be some truth in some of these statements, when we think and see the world, we notice everything has not changed. Yes, innovation is happening, but not all innovation is creating a new reality or ways of living for a society. To illustrate, renowned researcher and futurist Bill Sharpe (2013) introduced a three-horizons framework; one of those horizons is what he called H1 (or Horizon 1), representing the status quo. Sharpe wrote about systems and ways of doing things within this status-quo horizon permeating society in such a way that these systems and ways of doing things become infrastructure. Think about transport and traffic
systems, governance systems, and energy platforms as examples. A lot of innovation has happened in these areas, but the vast majority of innovation thus far has not replaced the car, the roads, the government, or our energy systems. One can see that although great improvements and accelerated technologies have revolutionized these systems, the effort has just extended further into the future the way we do things, and has not replaced them. In other words, when one thinks about change, one must think about change in all its parts, i.e. economically, politically, environmentally, legal, and social, to avoid being trapped by hollow narratives and headlines.

Here is a way to help us think about change in all its parts. Described as an “American titan of futures research,” Graham Molitor outlined one of the most comprehensive models of change in his trailblazing work published in 2003 entitled *The Power to Change the World* (Gary, 2018). In his model, Molitor described 22 points (or time points) on the road toward change. These points traversed a change journey which lasts anywhere from 21 to 100 years and covering from the time the change is first spotted to the point where judicial or constitutional changes are made to institutionalize the change as part of society’s adoption. Figure 11.2 depicts (on the right side) a modified version of his model. Although this is helpful in seeing the roadmap to change, we must think about this road in terms of forces pushing the change across the stages he had named. Yet, this notion of change would be incomplete without seeing emerging change and the forces cultivating and moving the change forward. On the left side of the figure is how we see change emerging. Basically, most changes are seen in some form of technology as weak signals in the beginning. They happen, a few people talk about them, but not much is changed. As the emerging change begins to become known and its potential for disruption grows larger, the discourse also grows, as well the implications regarding economics, social and environmental; then, political discourses increase. (This is represented by the growth of the “thinking about change” cone which starts very small at its bottom, and as time passes and more discourses, debates, events, etc., take place, the cone grows taller and wider—forming the upside-down triangle ending at the words “thinking about change.”) Ultimately, once the change is well-known and legislation is debated, the case for discourse begins to dwindle and most people begin to move on to the next headline. (This is represented by the cone reaching its largest width at the words “thinking about change” and then beginning to contract to its smallest width at
Fig. 11.2 Thinking holistically about change (Source Author’s adaptation of Molitor’s multiple-timeline model of change [Molitor, 2018, p. 14]. Note This figure makes use of two perspectives to think about change. The combination of understanding the change roadmap as change travels through Molitor’s three stages is combined with thinking about change in the social, technological, economic, environmental, political, legal, and ethical perspectives to create one holistic view of how change happened in the past and how emerging change could happen and travel into the future)

the top of the cone—forming the regular triangle form). Then, the cycle repeats itself with other and new emerging change. We can take the history and adoption of the car as an example and see this cycle. More recently, we can see social media’s development, AI, and the environment as other examples, although the change cycle has not been completed for these two latter examples. More specifically, one can take the instance of Facebook’s origins, rise, and now debates with Congress over data and citizen privacy (Romm, 2018). All the phenomena we have listed move at different speeds through the cycle depending on who are the proponents and what causes they decide to champion, and at what level of impact they begin to influence change (technological, economic, etc.). Seeing change holistically requires us to take both perspectives depicted in Fig. 11.2. The leaders in Foresight City must see and analyze these perspectives in
the past and follow them to the present. As well, the leader must perceive weak signals of change and foresee them moving forward into myriad futures. But before we move into the future, another critical aspect of achieving understanding is mapping both the system and the culture.

Mapping the culture and mapping the system is the third leadership foresight practice; this is also the last practice within the Understanding Domain depicted in Fig. 11.1. This practice is concerned with deepening our conceptual grasp about the profound structures defining the city. (The same practice can be used to define societies, nations, and all kinds of systems surrounding us.) Just as we noted the human genome in Chapter 9 as the blueprint for building a human, mapping the culture and mapping the system delineate the sequencing of nodes which build what we see today as the city. This is, of course, a complex process but is worth undertaking. Just look at the volumes of books written about culture. Still, many leaders are unsure about how to change or deal with culture in an organization. Yet, we cannot let this culture illiteracy get in the way of understanding the past and foreseeing the future. In short, we cannot discard culture as part of achieving a deep understanding of the past, so we can consider its potential evolutions into the future. Culture is important because it is “what we collectively think and believe...what we repeatedly say and habitually do...and what members in an organization [or city] will collectively feel” (LugoSantiago, 2017, p. 86). These collective forces, forms of thinking, forms of values, and forms of feeling, as we have seen by looking at the history of countries and civilizations, have shaped the past, continue to shape the present, and have an increasing potential to shape the future. We, therefore must understand what these forces, are. Mapping them begins with seeing them. Scholars and subject-matter experts, Drs. Edgar Schein (2010) and Ira Levin (2000), highlighted culture embedding mechanisms as telltale signs of the culture, as well as windows we can look through to inquire about culture. Some of those signs included rites, rituals, and traditions; stories, legends, and symbols; formal statements about values, creeds, and/or charters; leadership practices; and design of physical space. In mapping the culture, we seek to trace these embedding mechanisms and what we see through the windows as nodes and points in history. One way is to identify these signs and trace them to historical events, or key points in a horizontal timeline. One can also branch out (and connect) these historical events or traditions to other events and traditions to mark how one set of events, rituals, traditions, etc., led to the emergence of others. Then,
one can draw branches from those points of reference and connect them to their individual effects (also marked as nodes or points). In the end, the visual may compare to a system’s map, chronological tree, or concept map. The usefulness of this exercise is the thinking through and visualization of a cultural sequence and the interconnections to help us achieve deep understanding about how the present was formed.

The practice of mapping is not new, and its use in the city is not foreign either. The method has been used to deepen the contextual grasp of structures that are sometimes hidden. By drawing relationships between ideas, concepts, facts, and events, much can be discover. In that sense, mapping can also help define hidden aspects of city life, feel, and culture which may not always be obvious. For instance, the city of Melbourne, Australia embraced a study to consider feasibility considerations in urban policymaking in relation to people with disabilities. The aim was to build a disability-inclusive city—one city that could be enjoyed by everyone. Concept mapping, for example, was use to make active the participation of both citizens and governmental decisionmakers. During the process, priorities were identified as well as actions that would most likely drive the vision and goal of a more inclusive city (Rachele et al., 2020). Similarly, the City of Barcelona employed the use of mapping methodology to deepen its understanding of the perceptions of citizens living in different portions of the city against the city’s large-urban renewal projects. From planting trees to walkability and accessibility of the city by different mediums of transportation, the city was better able to understand the relationship between these projects and their positive or negative effects on the health and wellbeing of its citizens (Mehdipanah, Malmusi, Muntaner, & Borrell, 2013).

Just as with culture mapping in the city, we move next a step further into mapping the system. System’s mapping is a deeper look at the structure of things, their constitutions, and interconnections, so we can better understand what the outputs of that system would most likely be. Deeper inquiry into the system of things also facilitates a better forecast about outputs, in the present and the future (based on the feedback loops within the system’s structure that offer time lags between inputs and their resulting outputs—this is the black box of systems). Scientist and world’s foremost systems’ analysist, Dr. Donella Meadows (2008) highlights we would be less likely to be surprised by events if we could see how events accumulate into dynamic patterns of behavior; the system structure is the source of the system’s behavior and its resulting events. System’s mapping
starts with an understanding of the key actors in an environment and how they are related. We call these key actors, variables. We also express the relationship between the variables as links, and we observe the effect of one variable on another through symbols or letters. For example, in those variables depicted in Fig. 11.3, the letters “S” (same effect) and “O” (opposite effect) are used to state the type of relationship among the variables. Other authors may use other letters or symbols to depict those relationships. The main thing is one can map the system and be able to articulate the relationship one sees between the variables, so we can better understand and foresee the system’s potential behavior.

Another important observation to note is how one system has connections to and effects on other systems. Figure 11.3 displayed that relationship through feedback loops. One can also note the feedback connection not only connects and make systems interact with each other, but also produces a reinforcing or balancing behavior on another. The relationships displayed in Fig. 11.3 were kept simple for ease of explanation. Nonetheless, these become more complicated as we map and discover

![Fig. 11.3 Dynamics among variables in a system (Source: Author’s creation. Note: Sketch of the relationships among the variables affecting population migration and the relationship of this system to the environmental system in a city)](image)
new relationships. This exploration is especially useful in helping us understand why events happen despite expectations to the contrary, given the solutions we may have implemented in the past. (See Fig. 11.4 for an instance of a more elaborated case of system mapping.) For example, using the simple system dynamics portrayed in Fig. 11.3, one could imagine a city government being decisive about implementing measures to drastically reduce CO2 emissions. Nevertheless, several years later, they still see the degradation of the environment. The people in the city would be puzzled and ask, “Weren’t we aggressive about reducing CO2 emissions? Why is the environment continuing to deteriorate?” A look at the system would reveal the heavy toll of pollution has a time-delay effect on the environment. In other words, solutions will take time to see their benefits realized; this is the expected phenomenon seen in all natural systems around us—change is happening but seeing it will not be immediately apparent until sometime after when the magnitude of the change is

Fig. 11.4 The issues of city sprawl (Source LugoSantiago, J. A. [2018, November 13]. Note What will the future hold? City sprawl & systems dynamics. LS|EG. Using systems’ thinking, the author depicts the problem and effects of city sprawl. The depiction of the problem facilitates a discussion about how the emphasis on a system that is designed for the car aggravates the effects on the environment, the health of citizens, and promotes more city sprawling)
so vast that it can now be measured. This is the reason why is important to appreciate how quick solutions will not solve problems in the long term. In Foresight City, systems thinking (and systems dynamics) is fundamental in understanding not only today’s world but how the world would have to change to realize the behaviors we want to see in the future. We are truly illuminated when we are able to map the system. The grand discovery is the realization of the system’s structure. If we want to see change, we will have to work on realizing solutions that get to the system’s structure: change the structure, change the system’s behavior!

**The Second Domain: Anticipating**

Some years ago, I worked with members of a city council to facilitate strategic thinking about the future of their city. The council members felt population migration and urban development (among other sets of factors) around their city were growing fast, due to families trying to escape the growth and price hikes of the big city and opting for smaller towns. This was perhaps correct, but it was not going to be enough to understand what else was changing and how they would need to plan for it. The council members went through a series of exercises, leading to the formation of future visions. We did not get too far into that exercise, but what we discussed in that session just before we wrapped up for the day was enough to spark one member’s memory about an Apple video displaying some of the similar things we were talking about in our workshop. The video he was referring to was *Apple Future Vision 1987* (Inmoreau, 2011). This was a fascinating short video, perhaps the most likely product of a scenario development process (just like some of those discussed in Chapters 5–8). In it, a professor enters his office (a wide and spacious place with classic dark furniture). He opens a book-like computer (opened in the same manner with which we open a book). Then, he moves toward the window, and as he is looking outside through the window, requests to his electronic assistant to arrange his schedule, make appointments, and look up research for him. All these activities were done by talking to the computer he just opened (a form of a male-Siri was orchestrating the action). The tone was always conversational between the two of them. The professor was able to touch-screen his way through the computer once he returned to his desk, do some scenario modeling through parameter forecasting, and even overlay distinct and
separate research pieces into other pieces to explore the validity of his colleagues’ research findings. Then, he asked his electronic assistant to patch another colleague on the telephone line. They conversed via what looked like an earlier version of FaceTime, finished the conversation, and later the professor went to get lunch. Interestingly, as we move from scene to scene in the short video, one can see on the desk what we know today as an iPad (except that it opened like a book). In this device, we see FaceTime, iCloud, embedded cameras, and gesture and voice controls like those contained within Siri. But wait! The iPad’s first generation was released in 2010 (Apple Inc., 2010). From the time of the video to 2010 over 20 years have passed (23 years to be exact). If we would have been watching throughout those 23 years, we would have noticed touchscreen technology being developed, nanotechnology being advanced at great speed, giant steps taking place in speech recognition starting in the 1980s (Pinola, 2011), Siri being founded and later acquired by Apple, and other key advances in cellular phone technology. These things were emerging, and if we had thought about how we could put all these technologies together, we could have sensed the birth of the iPad. The same could have been said about the iPhone, social movements, business models, and the contemporary disruption of several industries to include the global economy. And if we had been paying attention, we would have, perhaps, acted or reacted differently to these changes. Herein lies the power of anticipating.

Anticipating is the second domain in foresight practice, and embedded in it are three specific leadership foresight practices. Recall the second domain and its three practices are depicted in Fig. 11.1. In Foresight City, citizens have freedom to maneuver because they have institutionalized anticipatory systems through the application of the three leadership foresight practices in this domain: Scan the Horizons, Design Futures, and Co-Create Strategy. The efficient and methodical integration of the three leadership foresight practices that make up the first domain with the actual application of anticipatory practices in the second domain produces three capabilities in Foresight City: (1) development of a sense for the unknown, (2) growth of intellectual capacities to foresee the plausibility of futures and the design of a future fitting of its citizens, and (3) the co-creation of the roadmap to the shared-image of the preferred future.

The first leadership foresight practice in this domain is scan the horizons. In essence, we take what was learned during the first domain of foresight practice (assumption and inquiry; reflection about the past,
present, and possible future implications, and the culture and system maps), and next we project this understanding forward. Projecting this understanding forward will highlight pockets of obscurity we must further explore. In projecting our understanding forward, we explore the horizon for signs, trends, and archetypes of what we know about the future, as well as possible emerging phenomena within those pockets of obscurity, creating a scan hit inventory. This scan hit inventory, the product of the horizon exploration for those signs, trends, etc., may be a validation of our understanding about the future. Nevertheless, this validation must be put to the test. Richard Slaughter (1999), renowned scholar and futurist, in his book *Futures for the Third Millennium*, noted the world is constantly emitting an infinite number of signals about the future, and a careful scan of these signals can reveal powerful new forces, opportunities, and dangers in the macro-environment; therefore, the goal of horizon scanning is to “reconcile sensitivity to new and significant information with careful, systematic selection criteria” (Slaughter, 1999, pp. 256–258). Therefore, we put the scan-hit inventory on trial by testing its content against, for example, the opinion of experts (as in the Delphi technique), strategic brainstorming, Futures Wheel, Futures Awareness Inquiry Tool, predictive analysis, and modeling to garner what strategy experts called *Strategic Intelligence* (Ashley & Morrison, 1999; Voros, 2003). This point about putting the scan-hit inventory to trial is important because it points to the aim of this horizon scanning process. The process of horizon scanning should be flexible in its practice, not systematized and tied to one or two specific tools, but expansive and in need of a multiple source of inputs, in addition to a system that will enable the leader to discriminate among all of the inputs to select critical information which helps Foresight City achieve strategic intelligence about the future. Surely, the leader can resort to artificial intelligence and automated data acquisition systems (to scan for specific data), but ultimately, the leader in Foresight city should not substitute any of these for the capacity of the human to think creatively, critically, and analytically about the selected essential information.

Having gone through the first leadership foresight practice in the Anticipating domain (Scan Horizons) to achieve strategic intelligence in Foresight City, leaders now prepare to design futures (the second leadership foresight practice in this domain). The leadership foresight practice of design futures starts with the confrontation of self. How does change look to me? What kind of “change” person am I? These two questions,
in particular, are aimed at confronting the views one has about change. Any of us can go back in our memory bank and think about the last experience we had, for example, at a conference. Whenever the speakers addressed change (or maybe we were the speakers), what form of change did they address? Out of the myriad forms of change which exist, one could bet the most prominent form of change addressed was technological change. Perhaps 80% of the time it was technological change being discussed while at more recent times it was something related to climate change. Beyond these two, people have a tough time thinking about other drivers of change. There was a time when very few people would speak about the environment as part of their change discourse. Matter of fact, I ask my students this question often and in seminars, and the response is almost always the same: technology is the number one answer, followed closely (and recently) by climate change. However, since the effects of the global COVID-19 pandemic in 2020, when I ask the same question, economics scores the top place, followed by technology, and climate change. And there is a good reason to shout economics as the top answer given the economic devastation felt as the result of the pandemic. But why is this discussion important? When one hears a person subscribed to technology, for example, as the major source of change, odds are the person describes every change as exponentially (the exponential pace of change). There is some truth in the exponential growth of change (the doubling of growth within equal periods of time), but this is not always constant across all things; in some areas, as in the depletion of natural resources, the doubling effect is occurring at shorter time intervals (Vago, 2004). If in another instance, when we hear a person who subscribes to the cyclic nature of change, we could expect the person to speak about change in terms of economic or political phenomena. Regardless, the main point is we must understand our biases, so we do not confine the future to one or two perspectives. There are other power perspectives one can explore in this process of confrontation. Sociologists and other practitioners speak about societal change, and very often, can explain the past and future through various theories, for example, culture theory, conflict theory, cycle theory, market theory, technological theory, evolution theory, and power theory (Bishop & Hines, 2012; Noble, 2000; Vago, 2004). In Foresight City, the process in this area of designing the future is to first understand the frame of bias. Secondly, it is for the foresighted leader to analyze the collected strategic intelligence through the process of horizon scanning and filter it through the different perspectives of change to see
how these perspectives explain how change might occur or develop in the future. Once this analysis is completed, the leader is ready to see and design plausible futures.

The process of seeing and designing futures is parallel to the process we discussed in Chapters 4 and 9. Therefore, in this discussion, we will not cover the same material but will touch on some of those areas as needed to clarify or expand the discussion in regard to Foresight City. In that discussion, we first discussed seeing and observing signposts, separating the predetermined elements from the critical uncertainties, and then finding the two most critical uncertainties to form the axis of uncertainty. Similarly, applying the process posited in the discussion of the first domain, its three leadership foresight practices, followed by the Scan Horizons leadership foresight practice of the second domain (refer to Fig. 11.1), we become equipped to do the same work done in Chapters 4 and 9, the work of imaging the future, but with more fidelity and impact. Therefore, we now move with confidence to work on building the axis of uncertainty and develop plausible futures scenarios (just as we did to build the four narrative scenarios of the cities we previously discussed in Chapters 5 through 8).

Scenario development is a crucial part of Foresight City because it forms the additional layer of learning necessary for knowing and foreseeing. Again, just like we mentioned in Chapter 4, the scenario development process is not intended to predict what the future will be but to explore what the futures (in plural) could be. This scenario development should not be the sole domain of a few individuals. As a matter of fact, in Foresight City, this is the collective input of citizens because they have been active participants and have developed an inclination for foresight which is now used in this phase to garner collective visions of the future, ranging from among the plausible, sometimes undesirable, to the preferred. The importance of their participation is accentuated by the need to create a layered and multi-generational view of the preferred future.

In defining these macro visions of preferred futures, we deepen the understanding of the future we want to have, and then, we image it. Futurist, Sohail Inayatullah (1998, 2007), developed a method called Causal Layered Analysis (CLA) aimed at deepening the understanding of the future we want to create by creating new narratives of them. Using CLA, the city can be described at four levels ranging from the litany (the first level known as the day-to-day headlines about the city), progressing
to the systemic view (short-term analysis that may include historical facts),
to the worldview (employment of critical thinking that seeks multiple
perspectives), to the deeper metaphor or myth (the fourth level describing
the deepest, unconscious dimensions about the city) supporting the new
narrative about the future. The point here is that this framework offers a
multi-layered approach necessary in the design of futures that move cities
beyond the superficial. For example, if one thinks about the city at the
litany level, one thinks about what is superficially known: traffic conges-
tion. In designing the future, this level envisions a congestion-free future.
Designs at this level may be too superficial and will not bring true trans-
formation. Think for a second. What has been the visionary response of
cities to this problem of congested cities? For the most part, the answer
has been the vision of cities with big bridges, widened streets, and so
on, all of which have caused more congestion. This design for the future
did not bring transformation; on the contrary, it brought more of the
thing we did not want to see. At the worldview level we can think of
the city as the sustainable city, tech city, or smart city, but this is not
enough for enduring, meaningful change. If we move up the levels of
CLA to the metaphor or myth level, we then think about the city in much
deeper dimensions. What is the deeper metaphor or cultural belief that
will describe the city of the future? For example, wealth in the city, big
city/small village, citizen as architect, united humanity, lost city, or social
control metaphors will all convey different core beliefs, in turn producing
different responses about the future. Here lies the real pathway to envi-
sioning a design about the future that will be transformative. Following
closely this envisioning, we image the newly created metaphor in order
to form a more perfect, collective picture of the future. Imaging is the
powerful instrument of Foresight City for the reasons we explored in
Chapter 4. (Imaging was also discussed in Chapter 9.) The aim in Fore-
sight City is to iteratively go through the process described here until a
collective image of Foresight City is completed. Then, we can move to
the last leadership foresight practice in this domain: Co-creating strategy.

This last leadership foresight practice of co-creation in this second
domain (Anticipating) emphasizes the word “co-creation” to make
known this is a cooperative process, not the domain of a solo leader
or a small group of corporate folks. Co-creating strategy is simply envi-
sioning collectively the plan detailing how we are going to get to the
preferred future. Simply thinking about a plan is not enough fuel to thrust
us forward. In Foresight City, the process of strategy is one of reflection. This strategy process is about seeing the different paths toward the preferred future (not one path but several may be appearing). Therefore, in preparing strategy, those involved in the process (a team composed of a multi-diverse set of stakeholder citizens and city leaders) reflect on what has been learned thus far (the discoveries made in the first and second domain) and analyze who are the power brokers in the environment (present and future), what has been affecting change, what is changing and what is not changing, and what is the direction of change. Moreover, those in the strategy process also reflect on the cultural structure and philosophies (evolutionary theories, technology theory, cyclic theory, and the like) which seem to explain what makes change happen in the environment of the city. Next, the strategy team designs every detail of the roadmap. There are thousands of methods and descriptions of strategy, from the typical classical models to more agile methods as in hoshin planning, describing strategy as perspective, position, plan, pattern, and even emergent; many also argue about the viability of strategy because its long-range view does not seem to be useful for organizations (Mintzberg et al., 1998; Westcott, 2014). Therefore, to delineate a prescriptive method is not possible here and would be foolish. Nevertheless, one can see how the flawed logic that strategy is unimportant has created a myriad of unintended negative consequences in the overall performance of smart cities (many of them discussed in the previous chapters). Perhaps, the greatest sign of a lack of performance has been the actual absence of a smart city strategy. This leads authors in the literature to seek intently but become frustrated in their attempts to “find a trustworthy description of what it takes to become a smart city” (Van den Bergh & Viaenea, 2016, p. 5) or stunned about how this important brick piece of building the future is largely an “unexplored field” (Gupta, Chauhan, & Jaisval, 2019). Rome was not built in a day (as the old saying goes), and neither will our cities of the future be built in a day. Therefore, in Foresight City, it is understood and practiced that strategy must be a process of multi-diverse teams with multi-generational reach, and a long-range view of the future. It is a relay race adjusted in speed and distance as the team moves in time and space, and as it gains more strategic intelligence about the future and the hazards of the journey. The product of the reflection is a roadmap (as we previously mentioned), but it is a visual roadmap used as a storyline of the future. In other words, in Foresight City, members of the strategy team, once they have completed this roadmap and have sought multiple
perspectives to develop the collective imaging artifact (an iterative process that produces the roadmap), they will feel as if they have been at the end of that roadmap. They journeyed and lived in the preferred future. The process was experiential and challenged the human senses. They were in a time dimension allowing them to experience the expedition as explorers and architects of that preferred future. As for everyone else, they are being tele-transported to that future, so the team members and the “past generation” can hear the stories of that voyage, and the strategic responses the team had to create as they went along the journey, discovering unplanned emergent phenomena, and overcoming it.

The Third Domain: Shaping the Future

The last domain, Shaping the Future, is perhaps the hardest for most but certainly conceivable in all respects. It deals with setting in motion the future we have already envisioned and have experienced. As seen in Fig. 11.1, shaping the future consists of three leadership foresight practices: Taking Action, Creating Discourse, and Monitoring. In Foresight City, shaping the future is doing what Michelangelo, perhaps history’s greatest sculptor, did in the year 1495 to create out of a marvel stone one of the world’s most prized creations: the angel at the Basilica of San Domenico, Bologna (Dunkelman, 2014). Popular media is replete with quotes about this moment; the most famous of them states Michelangelo saw the angel in the stone and chiseled until the angel was set free. Regardless of the historical evidence of what was said over 500 years ago, we can learn a credible point in this story. And that is the point of envisioning the future, allowing that vision to take over and release our natural human talents to be creative, letting the vision guide our hands and chisel, and finally, to be persistent, agile, and observant in the chiseling until the future is set free. As noted above, the process is hard for most, but not because it requires super-human powers and intellect, but because it requires long-range, multigenerational views and linkage, and one more important effort: diligence. The hard part is not to accomplishing the chiseling; the hard part is changing our ways of thinking and acting about the future.

The first leadership foresight practice of taking action in this domain manifests into the physical world (and sets in physical motion) the envisioned design and collective imaging of the future. Taking action is about taking the journey of our team (discussed in the previous section), the
team’s experiences in that journey, and their responses to the unplanned emergent phenomena, and building all these elements into actionable steps. The plan was envisioned earlier, and it was co-created into a roadmap. Moreover, the roadmap was traversed by members of the team and others who were able to experience the future and come back with lessons learned. In this first domain’s leadership foresight practice of taking action, all this data, experiences, intuition, vision, and the responsibilities which key stakeholders must have over the long-range view are fused into a plan of action with clear milestones and resources allocated to people and time eras. Today, we can see contemporary methods providing a template into how this method should be outlined. Typical project management methods could fit here, as well as other more agile methods as in those done in hoshin kanri and hoshin planning (Japanese-based strategic planning and policy deployment processes) practiced by modern quality professionals. In the instance of hoshin kanri and hoshin planning, designers of the actionable strategy can select up to four vision statements and link them through waterfall associations to actionable work plans, goals, multiple social groups and people, and other resources over extended long-range views to realize the predominant vision of the future through consensus in the development and deployment of action plans (Kubiak & Benbow, 2009; Tague, 2005; Westcott, 2014).

The consensus and deployment processes are what conceivably make this leadership foresight practice of taking action difficult. There could be many reasons for the difficulty. Earlier in the book, we noted the short-mindedness of many leaders as a factor in not being able to progress toward collective visions of preferred futures, i.e., political cycles, and leaders who move too quickly to the next job. Another difficulty not always realized is that strategy and action are social processes, and therefore, must be negotiated as part of the implementation and action processes (Ackermann & Eden, 2011). Without the consent of people, great initiatives will not flourish. This means leadership must be distributed (several power brokers involved in the processes, being actors and proponents) in both planning and deploying, so action plans can be reviewed and improved with input of many, rather than being developed in the black box of corporate offsite meetings and expected to be accepted by everyone. The hoshin kanri and hoshin planning we briefly discussed earlier is a good first step as it works on consensus from the beginning—consensus is part of the development and deployment of action plans, averting the flawed assumption that everyone will naturally accept and
carry out the plans as conceived. Another way to improve the chances of success in deployment of action plans is to give the strategy and action plans another look against acceptability.

This acceptability test must happen in two phases. First, one must discern the strategy, and next, one must make an assessment of it against culture. For example, authors Burton, Obel, and Håkonsson (2015) used a simple model to discern organizational strategy based on two dimensions: exploration (seeking innovative technologies and ways of doing things) and exploitation (taking advantage of known technologies to do new things). When those two dimensions of exploration and exploitation intersect, a quadrant chart is formed describing four states of strategy zones, i.e., high exploration with low exploitation, etc. (pp. 32–33). Applying this to cities, the acceptability examination is about looking at the strategy and action plans and discerning, in the end, what kind of strategy is the combination of strategy and action plans promoting; for example, is it high exploration with low exploitation? But this test alone is insufficient to speak about the potential for acceptability. Many leaders end up with strategy plans that seemed likely, but the plans end up failing the organization. Therefore, this assessment must next be matched to a city’s culture assessment to make a strategy-culture-fit test. For example, if the designed future strategy and action plans seem traditional (low exploration with low exploitation), and the city’s culture assessment reveals the city embraces values of innovativeness, entrepreneurship, and agility, how acceptable and successful the designed future strategy be? The strategy and the city are at opposite ends of each other in this example, and therefore, the chances for acceptability and successful deployment are dim.

A more profound interpretation of how strategy and action plans can be perceived is likewise desirable. Thus, we compare our findings about the strategy, action plans, and culture assessment against the culture and system maps we developed in the first domain (the Understanding Domain). Where are the conflicts in perceptions, culture paradigms, forms of thinking, and ways of acting? Where should we make adjustments? Where should we make compromises? One important point, once again, must be stressed here: In Foresight City, the process just described is being performed across multi-generational and environmental views to see that the road to the preferred future takes into consideration the resources needed (those resources people, groups, locations, and time will need) and those resources that will be constrained or depleted based on
the consumption of human activities. Additionally, foresighted leaders, in making a wholesome examination, should not lose sight of the emergent phenomena future generations can expect to face and will need to overcome based on what we know today about the future.

Next, leaders embrace and set in motion the second leadership foresight practice in this Shaping the Future Domain: active future-focused discourse in the city. In Foresight City, we are reminded the city should remain the domain of the citizen. Everything else should be subordinate to him or her. Hence, the first part of the name used to describe a city inhabitant (citi) reminds us of that value. Perhaps, the second part of the name (zen) reminds us about the oriental forms of culture aimed at enlightenment through thought and contemplation. This second part also reminds us about the responsibilization of the citizen—the growing of a city inhabitant into one who thinks about the city in all its forms to construct a collective, more prosperous union between the present and the future. The city and the citizen cannot be separated; their futures are tied together, and citizens of all kinds (city leaders, civil servants, community, or business leaders) must feel empowered and capable to teach and mentor others about the future. Without the citizens thinking about the city in all its collective forms and how those forms guide the future, there will be no achievement of a preferred future. The future will happen regardless; the effort is to make the preferred future we want to unravel. But a prerequisite is that citizens become conscious the futures exist and have been explored. One of those mechanisms in foresight is telling stories (Bishop & Hines, 2012). These stories should include details discovered during the exploratory journey of the future which the strategy team embraced. These stories must inspire and spark the imagination of young and old to clearly recognize the collective imagery and design of the future that was iteratively built during the Anticipating Domain.

The other important aspect of this future-focused discourse is to spark a debate about the future. In this debate, citizens begin to be curious about the future, a younger generation rises adopting and seeing future discourse as a natural habit, creating a link between what one generation saw and what the new generation will see and do. In particular, the actions we have thus far discussed begin to “chisel the marble” until the preferred future is set free. The current generation in Foresight City grows this sense for the unknown into the next generation as well as the capability and inclination to foresee. Because of the habit of future discourse, based on an exploration of the future(s), citizens cultivate more ethically-sound
leaders (refer to our previous discussion about the ethics of leadership and foresight in Chapter 10). The citizens also teach the future and are more likely to attain their preferred future because the visualization of that future changes neurological pattern formations in the brain, and the brain, not being able to tell the difference between what it experiences through the senses and what it imagines, begins to see the future as credible and achievable, even creating memories of that future (Chermack, 2011; Ingbar, 1985). Researchers also note the episodic details of the experience are used to create these memories of the future, which then form the basis for people’s anticipation and goal-directed behavior (Addis & Schacter, 2012; Ingbar, 1985). In other words, the discourse and the vivid experiences leave an imprint in the citizens, giving them the impetus and urge to create the preferred future. This concept, although amazing, is not new. Olympic athletes are known to practice this visualization as part of their training (Clarey, 2014). In Foresight City, the practice is to not only visualize the future but to actively engage it as part of the culture and habit of future-thinking. Engaging in public discourse sets in motion the future we seek, helps gather multiple perspectives, and further shapes future outcomes.

The last leadership foresight practice to discuss in this domain is that of Monitoring. The work is not done with the plan of action, action in place, and even the support and active participation of stakeholders. The environment of Foresight City, as for any other city or organization, is fluid and ever-changing. Therefore, the monitoring activity refers to the actual examining of signposts in the environment to signal the steps we are making are leading us down the path and future we envisioned. These actions are similar to ones we would take when visiting a friend. Our friend has given us directions to her house. We know we need to take road 123, then exit on Alpha Street, drive through High Street until we reach the stop sign. At the stop sign, we take a right and follow the street for two kilometers. Then, we take a right and see three houses: one yellow, one green, and two white. Our friend’s house is the first white house. As we drive down the road, and especially if your GPS is not working, we look for these signs. Once we see the signs, we are confident we are headed down the right path, and we will arrive to our future destination (our friend’s house). In monitoring, we do the same thing. The strategy team and other key stakeholders involved in the process look out for the signposts we know we could see. As these signs of the future appear, we make adjustments as necessary—we had already
traveled through this road, so we know what to do and where we perceive the sharp turns to be. Therefore, our experience on the road is a much more confident one, and we become increasingly better at anticipating hazards on the road. An important aspect of this journey is what authors Ashley and Morrison (1999) have termed as an Anticipatory Management System. This system allows the city to gather strategic trend intelligence and perform issue-vulnerability audits at regular intervals to forecast major roadblocks which can deviate the city from achieving its preferred future. Having this kind of strategic intelligence, city leaders and its citizens can prioritize issues based on vulnerability, impact, and effects to create appropriate responses. There are many tools available to leaders to do this; many of them measure and collect weak signals using artificial intelligence to do the scanning and organize the scanning hits into categories for further analysis. This process is continuous, always managed, and always communicated, so everyone in the city understands how we are approximating our destination. This process also requires the measurement of milestones, the examination about the effectiveness of measures, and the leadership accountability to citizens regarding the decisions being made, as well as the results.

**The Sustainment Band**

There must be a process of renewal and refreshing. That process is activated by the ever-happening presence of the sustainment band. The sustainment band in Foresight City is composed of two elements: Seek Multiple Perspectives and Scan Continuously (See Fig. 11.1). Both elements have processes of their own. We have discussed within the three domains these two sustainment band processes. For example, in regard to seeking multiple perspectives during the Understanding Domain, leaders assemble a diverse set of teams to look through the windows of the Futures Awareness Inquiry Tool. At each window stage, the team or leaders seek to develop foresight intelligence (to get a sense for the unknown and foresee the unforeseeable). This perspective-seeking is refreshed during the Anticipating and Shaping the Future domains, renewing what was known, so decisions, solutions, roadmaps, forms of thinking, and ways of acting can be synchronized to build the right imagery of the future and the preferred future. Moreover, as that is happening, the second element of the sustainment band is actively seeking and scanning for changes in the environment. As changes or signposts of
the future are recognized, these are fed back into the decision-making and strategy loops to forecast and adjust in real-time when necessary. The aim of all these components discussed (the domains, practices, and sustain-ment band) is to form a complete system which takes us from the present to our designed and preferred future.

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