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## Implementing sustainable goals with the catalysis team



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## Executive summary

This research has been commissioned by the Environmental Department of the City of Edmonton as part of the Sustainability Scholar Program 2016. It answers the question: How to ensure that strategic goals are reflected in operational decision-making. The answer, composed of specific and actionable suggestions, was obtained by a combination of literature review and consulting work. The recommendation aims at aiding the City to increase the likeliness of succeeding at implementing its sustainable strategy goals, so addressing the group of initiatives known as “a foundation for success” of The Way We Green program.

The proposed question is within the scope of the subject area called strategy implementation. The literature reviewed encompassed strategy management and organizational change. It revealed, first, that the challenges to implementing strategy are entrenched in the very features that make organizations effective: interdependence, technology, resource allocation, politics, cognition and values. Fortunately, it also revealed that some levers could be used to induce strategic change. The levers encompass mobilizing change through small steps that provide opportunities for learning from self and foreign expertise. Importantly, the suggested locus of change is organizational routines, which give access to the organization-wide structure, but are sufficiently small to conduct controlled change initiatives.

The recommendation is to set up a team to facilitate change toward sustainable strategy goals. The team members should possess four sets of skills: project management, knowledge on sustainable operations, re-design of organizational routines and integration of organization areas. Each of these competences “pulls” one or more levers uncovered in the literature. Previous experience with assembling and leading a team as the recommended suggest that its operation decreases resistance to change and makes existing resources more effective.

### **AUTHOR BIO**

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# 1 Introduction

In 2011, the City of Edmonton (COE) launched the strategic initiative named “The Way We Green”. This program proposes several strategic goals to the City and to the Edmonton community. By launching the plan, the COE’s signaled its commitment to sustainability and resilience, and positioned itself as a leader before the Edmonton community: “Although the City of Edmonton is one of many community players working to achieve Edmonton’s sustainability and resiliency vision, its roles as a coordinator, facilitator, educator, regulator, influencer, service provider, planner, and innovator are key<sup>1</sup>.”

One way to do that is ensuring implementation of strategic environmental goals. With this in mind, the Environmental Strategies department asked the author of this report to answer the following question: How to ensure that strategic goals are reflected in operational decision-making. The response should contain suggestions of specific and actionable ways to integrate environmental strategic goals into decision-making. Concerning The Way We Green, this research addresses the group of initiatives known as “a foundation for success”, being similar in nature to the proposed “strong underlying management system<sup>1</sup>.”

This research was conducted under the Sustainability Scholars Program edition 2016, a joint initiative of the University of Alberta and the City of Edmonton. In order to leverage on the author’s work experience, the chosen approach for this project was consultative work backed by a literature review centered on strategy implementation, a subject that encompasses the question posed by the Environmental Strategies department. Unfortunately, due to the project time constraints, important related topics like goal setting, strategic planning, performance control systems and scorecards could not be covered. For the same reason, no cost-benefit analysis was conducted for the recommendation.

Each single topic contained in this report’s literature review is covered by dozens of articles and books. Therefore, again due to the time constraints, the choices about the materials included here aimed at making the recommendation justifiable, more than delivering a systematic literature review. The author’s background influenced the choice of the sources for this research, which come mainly from studies on general strategy of profit-driven organizations. Moreover, sources targeted to practitioners (e.g. Harvard Business Review, MIT Sloan Management Review) were preferred when available. This avoided the review sounding too theoretical and distant.

Given the approach chosen, a relevant question is whether the insights generated by the reviewed literature are applicable to government organizations and sustainable strategies. This was partially ensured first by avoiding topics too specific to profit-driven organizations, e.g.

mergers and acquisitions. Second, because strategy management in governments usually follows the lead of profit-driven organizations' experience<sup>2</sup>, the resulting set should enjoy great transferability. Finally, based on a recent book edited by Harvard professors<sup>3</sup>, it is reasonable to assume that lessons uncovered by scholarship on strategy and change in general are applicable to sustainable strategies and change in particular. Of course, this report's content cannot substitute for specialized training on strategy and expert advice on implementing the recommended solution.

## 2 Literature review

Sometimes called “strategy execution”, strategy implementation refers to translating strategy into action guided by an organization’s overall goals<sup>4</sup>. Strategy implementation is seen as the logical step following strategy planning<sup>5</sup>. The usual viewpoint on strategy implementation sees the process beginning with the definition of *what* should be done, *who* should do it, and *how* it is going to be done, all in a top-down fashion. Some suitable process of goal decomposition defines the *what* and *who*. Setting up programs, tailoring budgets, providing procedures to be followed, and maintaining control over the execution account for the *how*. The usual tools for supporting strategy implementation are scorecards and performance management systems<sup>5</sup>.

### 2.1 Challenges

#### 2.1.1 Performance

In spite of the topic’s importance, most treatments of strategy give mild attention to strategy implementation. For instance, in strategy textbooks, it usually occupies a single chapter amongst a dozen others dedicated to strategy inception. It is also rare to find book-length treatments of the topic. However, strategy implementation actually poses a great deal of challenge on organizations. The following figures, coming from sources like The Economist Intelligence Unit, Harvard Business Review and The Academy of Management, give a flavor of the challenges involved. 60% of the executives believe that their companies are not successful at implementation; 40% of the value sought in strategic initiatives is not realized, remaining as “vision”; and 50% of all strategic decisions are simply not implemented<sup>4</sup>.

Even well-crafted plans that span years, like the launching of a new car model, are not free from failure. Professors Bower and Gilbert from Harvard cite an illustrative case from Toyota (emphasis added):

[I]n 2000, Toyota launched the Echo, a no-frills vehicle designed partly to protect Toyota from low-cost competition. But deep inside that organization sat salespeople in local retail operations. Because margins (and, more important, sales commissions) were higher on other Toyota vehicles, customers were repeatedly steered toward higher-priced models. **Even though the corporate office placed a high priority on the new product, the day-to-day operating decisions of the organization directed the realized strategy of the firm elsewhere.**<sup>6</sup>

Failure in strategy implementation is harmful not only to organizations that spend time, effort and resources in poorly realized strategic goals, but also for leadership performance. 70% of CEO departure is related to failures in strategy implementation<sup>4</sup>. A recent survey with executives revealed that only 39% of the top leaders were considered effective or highly effective at both development and execution of strategy<sup>7</sup>.

### 2.1.2 Control

As mentioned in this section's introduction, most approaches to strategy implementation rely significantly on management control systems and scorecards. These are spreading among governments<sup>8</sup> and are seen as key for implementing sustainable strategies<sup>9</sup>. However, exclusive reliance on such systems may be elusive. An article recently published in the Harvard Business Review reports on a survey conducted with some 7,600 managers in 262 companies across 30 industries<sup>10</sup>. The participants generally agreed that strategies in their companies were struggling to be implemented. Yet, the "research shows that best practices are well established in today's companies. More than 80% of managers say that their goals are limited in number, specific, and measurable and that they have the funds needed to achieve them<sup>10</sup>." Moreover, most of the companies featured "performance cultures", whereby people are hired, praised and promoted as a function of their past performance. Based on the research data, the authors conclude that strategy implementation has to be more than sticking to plans, goal alignment and excelling in performance. These findings do not negate the relevance of control systems, but invite to add more elements to the whole picture.

### 2.1.3 Root causes

Strategy scholars and practitioners vary on their opinions about what causes this state of affairs. Practitioners tend to look at aspects like competing priorities, lack of training and poor management<sup>5</sup>. By their turn, scholars that tackled strategy implementation as a topic on its own tend to focus on more structural factors. In the following, we present important structural factors suggested by authors that studied implementation more closely. Our main sources were Lawrence Hrebiniak (Wharton Business School at the University of Pennsylvania), Henry Mintzberg (Desautels Faculty of Management at the McGill University) and colleagues, and Joseph Bower (Harvard Business School) and colleagues.

**Interdependence.** One remarkable feature of formal organizations is the separation into units, departments and groups. This allows for having teams focusing on specific tasks that require specialized expertise and practices. However, this also means that organization work requires some form of coordination among its parts most of the time<sup>11,12</sup>. A survey on strategy implementation conducted by Donald Sull (lecturer at the Massachusetts Institute of Tech-

nology) and colleagues capture the importance of interdependence for strategy implementation:

[W]e ask survey respondents how frequently they can count on others to deliver on promises ... When we ask about commitments across functions and business units ... [only] 9% of managers say they can rely on colleagues in other functions and units all the time, and just half say they can rely on them most of the time. Commitments from these colleagues are typically not much more reliable than promises made by external partners, such as distributors and suppliers. When managers cannot rely on colleagues in other functions and units, they compensate with a host of dysfunctional behaviors that undermine execution: They duplicate effort, let promises to customers slip, delay their deliverables, or pass up attractive opportunities. The failure to coordinate also leads to conflicts between functions and units ...<sup>10</sup>

These findings resonate with a previous study of strategic transformation in IBM aiming at allowing that company to profit from its innovations. Professors Tushman and O'Reilly from Harvard conducted a study with the teams in charge of the initiative. They report: "Participants were struck by the complex interdependencies within and outside IBM. ... Participants observed that ... most of the firm's strategic opportunities involved cross-IBM interdependencies ..."<sup>13</sup>

In sum, achieving strategic outcomes may require new ways to combine expertise. This is especially true when people are used to formal ways of coordinating, e.g. by means of standard procedures<sup>11</sup>. However, novel practices, e.g. sustainable ones, may lack standardization, making necessary to resort to informal contact<sup>12</sup>, at least until new standards are in place.

**Technology.** Technology refers to the work done by an organization. It encompasses not only specific hardware (equipment, machines, instruments, etc.), but also the skills and knowledge to operate the hardware (e.g. maintenance of diesel engines of ETS buses) and even the ways of organizing hardware and skills in order to produce desired outcomes (e.g. the processes to clean streets after a snowstorm)<sup>14</sup>. Novel technology (e.g. driverless vehicles) may enable profound strategic changes, as it may novel uses of existing technology (e.g. standardization of airplanes by Southwest Airlines)<sup>11</sup>. Conversely, existing technologies may pose challenges to strategic change. For instance, de-carbonization of public transportation may face hard decisions about replacing or retraining workforce specialized in engines fueled by oil derivatives. In a similar vein, the impact of information technology (IT) and related processes on strategic change should not be underestimated. In large organizations, planning and control systems require special attention. On the other hand, IT can be an ally for getting around problems of coordination and information sharing when implementing strategies<sup>15</sup>.



**Resource allocation.** “[S]trategy is crafted, step by step, as managers at all levels of a company – be it a small firm or a large multinational – commit resources to policies, programs, people, and facilities<sup>6</sup>.” In this excerpt, Bower and Gilbert refer to resource allocation, which encompasses activities like production of goods, service delivery, purchasing, and other deployment of human effort (e.g. meetings). Resource allocation results mostly from the operations of three mechanisms in organizations. First, the *position* a manager occupies in the organization and her professional knowledge guides how she allocates the resources assigned to her area<sup>6</sup>. Second, employees’ effort leans toward the direction signaled by *incentives* (rewards and sanctions) coming from performance management systems<sup>12,16</sup>. Finally, some organizational *programs* (i.e., patterns of activities), e.g. budgeting, govern grand lines of resource allocation<sup>12</sup>. Each of these mechanisms may prevent resources from going to new strategic change initiatives.

**Politics.** Politics is “activity that rearranges relations between people and the distribution of goods ... through the mobilization of power<sup>17</sup>.” The ‘power’ in this definition may have origin in management roles, professional authority (e.g. an air safety certified engineer), a person’s ability to influence, control over resources (e.g. information, budgets, an employee’s own capacity for work), gatekeeping and relationship to influential people (external or internal to the organization). Organizational politics is likely to be conflictive but it is not always so<sup>18</sup>. In strategic management, the exclusion of some voices from the planning process may affect commitment in strategy implementation<sup>19</sup>. Also, strategic goals may signal changes in the internal distribution of resources, bringing about conflict<sup>12</sup>. It is noteworthy the relationship between politics and interdependence. In change processes, after interdependence is realized, political activity is likely to ensue in order to garner support from depended groups. This usually involves negotiations of exchanges and commitments.

**Cognition.** “Strategies don’t exist in any concrete form; they are nothing more than concepts in people’s heads<sup>11</sup>.” Due to this abstract nature, human and organizational cognition pose three challenges to strategy implementation. First, the illusion of objectivity. While change and strategy actually refer to wishes about the future, there is a tendency of thinking of strategic goals as objective, that is, surely attainable, almost existent. Consequently, strategic goals are sometimes seen as unquestionable. This assumption brings risk to strategy implementation inasmuch it prevents learning from perspectives diverse of those that created the goal, as well as it can stifle collaboration<sup>11</sup>.

The second cognitive challenge posed by cognition is the tension between future and present. The tension appears in the linkage (or lack) of long-term strategic goals and short-term operating objectives. “[M]ost people in an organization can’t manage armed only with a

strategy<sup>12</sup>.” Once operational decision-making is aligned to strategy, there should be a way to measure operational performance in a way compatible with the long-term goals. Moreover, by looking at the operational measures, one should be able to grasp whether the performance of the strategic goal is at risk<sup>12</sup>.

The third cognitive challenge concerns attention resources, which may be lacking during strategy implementation<sup>11</sup>. In organizations, in order to make a decision or take action, an issue has first to grab the attention of some organization members<sup>20</sup>. Indeed, organizations have powerful devices to shape and direct attention<sup>21</sup>. So, it comes as no surprise that “competing activities and crises [taking] attention away” was one of the most cited obstacles to strategy implementation appearing in a survey with Fortune 500 companies<sup>5</sup>.

**Values.** Values are in and around strategy and organizations. Organizational culture, which is a set of values and norms, “elicits and reinforces certain behaviors within organizations<sup>12</sup>.” For instance, Pratima Bansal, from the Ivey Business School, reports how consistency with organizational values made environmental issues seen as ‘strategic’, so fueling their solution<sup>22</sup>. On the other hand, initiatives perceived as contrary to the prevalent culture give origin to reactions that try to re-affirm and reestablish cherished values<sup>12</sup>.

Values are not static, for executives try to shape an organization’s values through strategic vision<sup>11</sup>. For instance, in her studies of purpose-based companies, Rosabeth Kanter, from Harvard, documents how social and environmental values were used as drivers and resources for strategies in large companies around the world<sup>23</sup>. However, ‘shaping’ may also mean ‘forgetting’ values. Hrebiniak documents cases of companies that needed to leave behind certain values in order to be successful again in their industries<sup>12</sup>.

Interdependence, technology, resource allocation, politics, cognition and values are at the core of organizations, be they profit-driven, non-profits or government bodies. That is, the very elements that make an organization effective may hamper strategic change.

## 2.2 Levers

For some authors, like Hrebiniak, the proper way to deal with the formidable challenge posed by the root causes just reviewed is to impose a “disciplined process” of change to strategy implementation. Not surprisingly, he spends the bulk of his book describing several “logical sets” of connected activities that top management can resort to<sup>12</sup>. However, other authors, like Deborah Ancona, from Harvard, argue that the answer may rest on relying less on tight plans and control and more on distributed teams and leaders<sup>24</sup>. In the remainder of this section, we explore this second idea, by presenting what we see as levers of strategic change.

### 2.2.1 Locus

As we saw, the challenges to implementation rest on organization-wide structures. So, it sounds paradoxical that the best place for intervening is “closest to the action”. Based on the survey cited before and their experience as consultants, Sull and colleagues comment on (what they call) the myth that “execution should be driven from the top”:

In large, complex organizations, execution lives and dies with a group we call “distributed leaders,” which includes not only middle managers who run critical businesses and functions but also technical and domain experts who occupy key spots in the informal networks that get things done.<sup>10</sup>

This is consistent with Bower and Gilbert’s insights on how strategy actually happens: “crafting strategy is an iterative, real-time process; commitments must be made, then either revised or stepped up as new realities emerge<sup>6</sup>.” Indeed, this may be behind a conclusion reached by two seasoned strategy consultants in a Harvard Business Review article. Based on a survey with senior executives from large companies, they state that “the timing and structure of strategic planning are obstacles to good decision making<sup>25</sup>.” Mintzberg sums it up: “formulation and implementation [of strategy] are intertwined as complex interactive processes in which politics, values, organizational culture, and management styles determine or constrain particular strategic decisions<sup>11</sup>.”

These “iterative” and “interactive” processes take place in what we call organizational *routines*. A term that evokes “regularity” and “stability”, routines are a core feature of formal organizations<sup>20</sup>. Routines are recurrent patterns of behavior (i.e. practices). They are social settings where multiple people interact. Routines develop through time (i.e., they are processes<sup>\*</sup>) and are deeply ingrained with an organization’s values and power structures<sup>26,27</sup>. Indeed, Chris Argyris, from Harvard, used to say that in order to know how an organization thinks, you should look at its routines<sup>28</sup>.

Routines afford organizations with coordination of activities, control of outcomes, economy of cognitive resources, uncertainty reduction and knowledge storage. They also make up the baseline against to organizational change is assessed<sup>26</sup>. Martha Feldman (University of California, Irvine) and Brian Pentland (Michigan State University) argue that both performance aspects of routines and routine participants’ reflexive abilities create opportunities for routine change. A simple example helps to make this point clearer:

The hiring routine ... imagine that there is a big snowstorm, and a really promising job candidate is unable to complete a scheduled campus visit. Due to pressing deadlines, the visit cannot be delayed or rescheduled. In desperation, someone suggests conducting the visit via vid-

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\* Indeed, most of what is known as “organizational processes” is routines.

eoconference. Remarkably, everyone agrees, the arrangements are made, and the “visit” takes place as scheduled, but without the candidate appearing in person. [Then, somebody thinks] Could “virtual visits” become a regular part of the hiring routine for the department?<sup>27</sup>

From the preceding discussion, we see that, on the one hand, routines work like “doors” for accessing the organization features that usually oppose strategic change. On the other hand, routines present themselves as a smaller locus of change than the whole organization. As a sign of its promise, the idea is already being explored by strategy scholars<sup>29,30</sup> and public strategic management<sup>2</sup>. Strategic management based on the philosophy of command and control has adopted the idea too. For instance, in the Balanced Scorecard, the “process perspective” is one of the four to guide strategic change<sup>31,32</sup>.

### 2.2.2 Pace

We are used to think of organizational change as episodic and as a response to some external event<sup>33</sup>. However, research is finding that change processes can be more varied and that organizations that are capable of continuous change are more successful<sup>33-35</sup>. Change requires *learning*. So, the speed of change should be that of learning. Similarly, Mintzberg argues that strategy thinking is a learning process. It benefits from combining strategic guidance with managers’ local knowledge and experience<sup>19</sup>.

Their study of strategic renewal at IBM convinced professors Tushman and O’Reilly, from Harvard, that strategic learning should constitute an established organizational practice guided from above (emphasis added):

We suggest that **strategic renewal is** not an event, a set of steps, or a program, but **an engineered social process** ... This process is rooted in a series of concrete strategic challenges to the status quo ... [and] **uncover[s] idiosyncratic root causes at the unit level as well as more systemic root causes at the firm level**. ... the extended management team **collectively learns how to lead proactive change**. This **learning is grounded in collective cross-level and cross-firm experiences and conversations** in solving real strategic challenges<sup>13</sup>.

Learning is improved when it takes place in experiments that introduce small changes, as found by professor Ancona in a study on green initiatives. She found that the experiments allowed for cumulative learning from failure and retention of more promising alternatives<sup>24</sup>. Kanter, which studies organizational change since the 1980’s<sup>36</sup>, highlights the stepwise nature of effective change: “Dividing big changes into small increments with clear milestones is helpful for measurement and morale; each milestone successfully passed is a cause for celebration, or each one missed a cause for readjustment<sup>23</sup>.” Accordingly, Thomas Lawrence, Sal-

ly Maitlis (professors in Oxford) and colleagues found that effective, lasting change occurs first as local learning before diffusing through the organization<sup>33</sup>.

### 2.2.3 Enablers

We also found some conditions that enable effective change. We call them enablers: vision, mobilization, knowledge and communication. It is noteworthy that the change enablers are associated with certain roles in the change process. That is, the conditions for change come to life by the action of certain change agents.

**Vision.** Mintzberg argues that strategy is a type of “seeing”<sup>11</sup>. Strategy as ‘seeing’ is communicated through ‘visions’. Or aspirations and intents, as Tushman and O’Reilly note: “We suggest that strategic renewal is ... [a] social process anchored by an overarching aspiration and a paradoxical strategic intent that unfolds over time<sup>13</sup>.” Kanter notes that the change initiatives are guided by visions and help to diffuse the values behind these visions:

In the vanguard companies, numerous local initiatives reflect the values and demonstrated the change goals in action, showing what they could mean concretely, while at the same time producing both financial and social benefit for the company ... These initiatives made the guiding theme, the purpose and values, real to everyone and were critical in shaping the culture<sup>23</sup>.

Even if visions come from above, there need to be agents for spreading them. In his case for re-thinking strategic planning, Mintzberg urges that strategy planners begin *encouraging* strategic thinking among managers besides doing strategic programming. In the first capacity, they would work with managers to have them thinking about changes that should be brought about in the future. If this is missing, managers tend to emphasize action in the short term<sup>19,37</sup>. However, because they are abstract, new visions (e.g. sustainable operations) are too tenuous. As such, they face challenges to be acted upon. Then, Kanter suggests: “Repetition and redundancy help get attention in a noisy world of too much information. ... without a common guiding theme, it is impossible to gain organizational coherence ...<sup>23</sup>”

**Mobilization.** Kanter argues that change need to be actively pursued: “Changes need people who become passionate about seeing that they take place. Champions are the activists and cheerleaders for change<sup>23</sup>.” Accordingly, Bansal found that individual concern was critical to respond to natural environmental issues<sup>22</sup>.

Mobilization works, in the first place, by supplying attention to new issues. Claus Rerup, from the Ivey Business School, argues that effective organization response to emerging issues is possible only by maintaining stability of attention, which is “generated through mul-

tipl, repeated, and focused scanning of a few key issues over time<sup>38</sup>.” Kanter urges that, once sustainable issues get attention, action over them must take place:

Early successes (quick wins) show that change is possible and indicate what the change means in practice. ... Proof of concept through a robust demonstration is essential to overcome inertia and get anyone to believe that change is possible. ... When change is an official process, it is important to get the grass roots involved in shaping change by picking projects that particular units can tackle. ... Small wins give people the confidence to embrace the change and try even bolder innovations over time, and local action initiates innovations that support the overall goals while shaping the specifics<sup>23</sup>.

**Knowledge.** Strategic change motivated by new values, like sustainable change, may require new knowledge. Again, in Kanter’s words:

How do people know what to do to make the change operational, to make it real in their activities? The same words can be understood differently by each part of the organization as interpreted from their own perspectives. Therefore education is necessary to communicate the why, what, and how of change. ... Change is sometimes difficult not because of resistance, but because people simply don’t know what to do or how they should act differently<sup>23</sup>.

In accordance with that, consultants Hitchcock and Willard, authors of books on sustainability planning and implementation that went several editions, dedicate a number of chapters to describe good practices to serve as reference for new adopters<sup>39,40</sup>. Kanter would agree: “Local units need role models to learn from the experience of their peers, to see what’s possible, and to be spurred to new heights<sup>23</sup>.” However, Golden-Biddle, from the Boston University, warns about blind adoption of practices: “Instead of simply adopting other organizations’ best practices, screen the way work gets done in your organization through those best practices in order to generate new ideas. In other words, use best practices to generate even better practices<sup>35</sup>.”

**Communication.** Rerup found that it is not sufficient that just one part of a complex organization dispenses attention to a new strategic issue. He argues that, without “similar or compatible attention to issues ... across levels, units, and people”, organizational learning is incomplete and the organization will likely fail to respond to the issue<sup>38</sup>. Such coordination is achieved through communication, of course. Kanter emphasizes the role of communication in change processes:

Change requires much more communication than routine activities. Top leaders need to know what’s happening in the field so they can make adjustments to support it or steer it in a different direction. ... Change can be chaotic without a way to communicate what’s happening everywhere so that anyone can see the context, know the full array of actions, and can modify their own plans accordingly<sup>23</sup>.

In the initial steps of change, it is unlikely that organizational structures to promote effective communication be in place. Therefore, organization must rely on liaison devices, which Mintzberg defines as “a whole series of mechanisms used to encourage mutual adjustment within and between units.” Among them, he cites liaison positions and task forces<sup>11</sup>.

## 3 Recommendation

Based on the insights coming from the literature review and the author's experience with organizational change, this section presents an answer for the question posed by the Environmental Strategies department. First, an outline of and rationale for the solution are presented. Then, the solution's core mechanisms are explained in detail. Finally, practical issues concerning how to implement the recommendation in the organization are presented.

### 3.1 Outline

#### 3.1.1 Rationale and solution

The idea's essence is to combine top-down and bottom-up approaches to strategic change in the form of a team whose members help the City's departments and units to implement change toward sustainable operations. The idea departs from facts about barriers to change the author came to realize in his consulting practice, which nicely resonate with findings in the literature.

First, more easily than not, organization members are willing to implement strategies due to their commitment to the organization. This is not to say, however, that they do not have reservations about the strategic goals or that it will be easy to adapt to the new goals. Indeed, because operational staff usually have not been involved in strategic planning, they lack the understanding on why the change is relevant. Then, once the change is agreed upon, the next obstacle to overcome is to leave the comfort zone of current routine behavior. That is, current priorities stifle fledgling motivation for change. Additionally, the routines to change seem too numerous. To complicate matters, strategic guidance always lack important details, and the team may also lack ready knowledge in order to choose suitable solutions.

For the mentioned reasons, if left alone, departments and units may not find motivation for strategic change or feel lost in case of trying it. So, in order to accelerate the process, the City could resort to a team for facilitating sustainable strategy implementation. In this report, we call it the "strategy catalysis team", abbreviated "CAT". Each organizational unit helped by the CAT team will be called "target area". The term "catalysis" comes from Chemistry. It refers to the acceleration of chemical reactions by the use of special substances called "catalysts". A catalyst participates of a chemical reaction, but does not undergo permanent chemical change<sup>41</sup>. So, it can be reused in a new reaction.



Each member of the CAT team plays the role of a change facilitator. A facilitator teams up with and assist the target area in changing some routines in order to implement sustainable goals without disturbing the area's remaining tasks. When she is done with a target area, the facilitator may assist a new one. This way, a small team of facilitators can stimulate and oversee change in a good deal of target areas. The effectiveness of the CAT team rests on four sets of skills, which are described in the section Competences. Before, however, it is instructive to know how teams have been thought to assist with strategic change.

### 3.1.2 Precursors

The combination of top-down and bottom-up approaches to strategic change is not new. Neither is the use of internal consulting teams to assist strategy management efforts. As far as 1994, Mintzberg argued for a new role of strategy planners: to stimulate strategic thinking among managers, which he saw as the true strategists, by feeding them with strategic visions and data<sup>19</sup>.

In a more practical vein, we find an application of teams described in Tushman and O'Reilly's report on IBM's strategic renewal between the end of the 1990's and beginning of the 2000's. The CEO launched an initiative in whose core were workgroups in the business units developing full-fledged strategies beginning with "strategic challenges" proposed by the top management. In particular, the groups should uncover the causes that were preventing the company from profiting from its strong innovativeness. The authors report that, after some years of experience and relative success, the initiative became the base of IBM's strategy management, even after the departure of the CEO that originated the idea<sup>13</sup>.

Team-based approaches are being adopted even by methods more akin to command and control. After some 15 years working with companies implementing the Balanced Scorecard<sup>21</sup>, its proponents, Kaplan and Norton, perceived that better and longer-lasting achievements were obtained by companies that established the "office of strategic management". Acting as an internal consulting unit, the office members oversee all strategic related activities, supporting the departments to refine the strategic plans and even intervening in the management of strategic initiatives that are not doing well<sup>42</sup>.

This report's author experienced first-hand how teams can be effective change agents. In the five years before initiating his doctoral studies, he assembled and led a team whose purpose was to spur organizational change toward more effective and efficient processes and to stimulate the use of measurement as a tool for better management. The organization where it took place shares important features with the City: well established, large, committed employees, and geared to operational activities. The principles guiding the team's working were

as follows. First, implementing process improvement toward goals established by the top management through projects<sup>43</sup>. The projects were small and highly focused on concrete problems whose solution could be evidenced through measurement or direct observation<sup>44</sup>. The problems were tackled iteratively with close participation of the target area members and project sponsors<sup>45</sup>. Last, but not least, the knowledge required for solving the problems came substantively from the target area, whose leadership and stewardship was ever stimulated by the author's team<sup>46</sup>.

## 3.2 Competences

The catalysis team's effectiveness rests upon four sets of skills its members possess: project management, sustainable operations, routine re-design and organizational integration. Each of these four competences addresses one or more of the change levers seen before. The following sub-sections describe each competence in detail.

### 3.2.1 Project management

The facilitator's most basic work is one of coaching the implementation of sustainable strategic goals. As such, she organizes meetings, elicits steps for implementing the goal, ensures that tasks are distributed among the target area members, and monitors their accomplishment periodically. In this capacity, her goal is to sustain the department's mobilization to implement the strategic goal. To use a metaphor, the facilitator acts like as a "metronome" for goal implementation, dictating the rhythm and being a reference for the participants.

While we use the term "project management", we are not recommending the adoption of formal procedures or frameworks of project management. Our intended meaning for project management is effort coordination. By this, we mean goal decomposition, task allocation, execution monitoring, and task integration. Any suitable framework for ensuring these activities can be adopted by the CAT team, the target area or even the City as a whole. In particular, the facilitator does not see goal decomposition and task monitoring as ends in themselves, but as helpers to sustain mobilization against the inertial tendencies of routine work.

Mobilization promoted by a CAT facilitator has two important features: produces tangible results and relies heavily in the target area's expertise. The key for achieving these is to decompose the full sustainable strategic goal into smaller sub-goals. A sub-goal represents an actual advancement in the target area's sustainable operation, not a mere step toward a larger goal. The CAT facilitator is responsible for ensuring that each sub-goal is not too easy or too hard, that is, each sub-goal displays a certain amount of challenge. There are many ways of achieving that, mostly depending on the nature of the overarching strategic goal, but implementing it in small scale is usually a good choice. Implementation at small scale

gives the target area an opportunity for experimenting with sustainable ways of conducting their work. It also allows for some failure, because, if something goes wrong, few resources would have been committed.

The “how” for implementing each sub-goal must come from the target area. Relying on their own expertise gives them a sense of stewardship of the process and increases the likelihood of success. Also, this is a value-oriented approach, i.e., once implemented, each sub-goal should produce a clear value. This can be assessed as improvements in learning (about prerequisites, risks, ways of doing, etc.), practices change and/or measurement of suitable variables. This way, accomplishing a sub-goal meets the important criterion of being a “small win” toward the overall sustainable goal.

### **3.2.2 Sustainable operations**

Unfortunately, sometimes the target area’s understanding of the “why” of the change is not sufficient to sustain its mobilization. Therefore, the CAT facilitator works for sustaining a vision of the importance of the sustainable strategic goal implementation. Again, there are many ways to achieve this, but one deserves mention: linking the sustainable strategic goal to the target area’s ultimate purpose or values. By hooking into these powerful motivators, sub-goal achievement will effectively look like a “small win” for the target area.

Similarly, sometimes the target area expertise is not sufficient to bring about sustainable change (i.e. its “how”). In this case, the CAT facilitator acts as a “bridge” to well-known sustainable practices related to the target area work. This can be achieved by the CAT team maintaining a catalogue of implementation practices. They can also work as an extra resource (“slack”) for the target area, by researching good practices available outside their catalogue.

### **3.2.3 Routine re-design**

If a sustainable strategic goal could be translated into a case that can be processed by a department’s routines, the goal would be easily implemented. However, this cannot be expected of sustainable goals, because they are based on values that may not be ingrained in current routines and/or depend on technologies (and vendors) that may not be familiar to the target area (e.g. LED lamps). This situation sets the stage for routine re-design. At first, routine re-design is very similar to usual process improvement. However, it looks at more aspects of the work being done than work tasks and their ordering; how people coordinate activities; how people relate to the tools (including software) and equipment that execute or support task execution; the rules guiding the execution; and connection with organization-wide systems.

Re-designing routines is a process of uncovering issues to tackle and experimenting with solving them. The target area's expertise must be explored at its full potential through brainstorms. The facilitator must avoid the attitude of coming up with a ready solution. However, she must be attentive to the shortage of solutions being suggested by the target area, which may be turned into an opportunity to look for foreign good practices. Once solutions seem to make sense, experiments must be run. It is expected that they reveal aspects that must be tweaked in order to process more cases with more quality. Throughout the process, iterative plans linking the initiatives are constantly revised. The facilitator shows great respect for the ideas of the target area, but, at the same time, she displays critical inquiry, to elicit the best contributions.

While formal processes are routines, most organizational routines are not formalized or are even acknowledged as repeatable patterns of behavior, e.g. habits of decision-making and problem-solving. So, the facilitator must observe the work done in the target area besides acting on conversation only. In addition to the routines' features cited before, the facilitator attends to other elements that may give her an edge on changing the area's routines. First, the area's values. To find a linkage between them and the sustainable strategic goal is precious and will ease the change. The next great thing to attend to is pre-existing ideas from the area's employees. Sometimes good ideas were there for a time, but have never been leveraged by the area's leadership. One advantage of existing ideas is that they are automatically championed by their authors. Next, the facilitator attends to discourses about requirements for implementing change: rule changes, new resources, etc. Finally, the facilitator notes wasteful processes carried out by the area. While they may not be related to the sustainable strategic goal, efficiency gains accrued by revising or getting rid of them may generate resources to invest in sustainable change.

When the target area finally agrees on adopting a new practice or routine that was successfully experimented, the facilitator strives for measuring the new routine, in order to link with the high-level measurement of the strategic goal. The measurement should be smart in the sense that it readily supports decision-making to correct deviations of the right course of action.

### **3.2.4 Organizational integration**

In highly hierarchical organizations, like the City, each department's activities display a great deal of self-containment. At most, points of integration with other parts of the organization are usually well-known, sometimes even standardized. However, when it comes to change, hardly these dependencies will suffice for the implementation of a new strategic goal. That is, unforeseen dependencies may become salient.

Four types of dependencies are especially common: goal implementation tasks cannot be carried out entirely within the target area; goal implementation depends on resources the target area cannot afford or has no authorization to acquire; goal implementation may generate collateral effects over other areas; goal implementation cannot proceed due to organization rules (or lack of). If not addressed, these dependencies may halt the implementation.

In situations like these, the CAT facilitator plays the liaison role referred to in the literature review section. She does so by promoting conversations and negotiations with other areas and management levels. She assists the target area in identifying potential collaborators, counterparties and sponsors, and in framing the target area needs and terms of negotiation. Consequently, throughout the project, CAT facilitators carry “rich” information between organizational levels and department walls. Also, in a certain sense, they behave as “spokespersons” of the requirements for implementing the sustainable goals.

### 3.3 Organization

We propose that the City constitute a team for facilitating environmental strategy implementation by its departments. The team will be structured as an internal consulting area.

#### 3.3.1 Composition and report

Team members play one of two types of roles: facilitator and supervisor. The facilitators’ work has been mostly described in the preceding section. Here is added that they should enjoy a great deal of autonomy to coach their projects. Each facilitator may coach from one to three projects concurrently. It depends only on the projects’ difficulty. The supervisor’s main role is to oversee the facilitators’ work. She acts as a senior consultant, assisting the facilitators under her supervision and validating their ideas. While the supervisor does not coach projects, she usually participates of some activities in all of them. However, in difficult situations, she can take the lead, if the facilitator in charge agrees. Importantly, while the facilitator may not be an expert in routine re-design, the supervisor must. So, she serves as a coach of the facilitators under her supervision. The supervisor also is attentive to opportunities for integration among projects being conducted by her facilitators. Finally, the supervisor represents the team before the environmental management steering committee.

Functionally the strategy catalysis team reports to the corporate sustainability officer (CSO). The projects to tackle and priorities are defined by the environmental management steering committee. The CAT team reports the projects to the CSO and to the steering committee. The CAT team works with the environmental management working committee to gain access to the departments and units, to validate ideas and proposals, and to back the team in difficult negotiations with City’s departments, represented or not in the working committee.

### 3.3.2 Pre-requisites

There are a number of pre-requisites for the CAT team to be effective as a change agent in the City. First, it needs to be invested of *authority*. This means that departments and units should see the CAT team as an agent (or envoy) of the CSO and the environmental management steering committee. This means that their role should be made clear to any target area at the beginning of the project. This feature reveals its importance in situations of conflict about difficult decisions and negotiations. In such situations, it must be clear that the CAT team is backed by the CSO and the committees. Of course, this requires that the CAT team seek high levels of alignment with those organization actors throughout each project.

A second, but equally fundamental, pre-requisite concerns the *accountability* for the projects the CAT team coaches. The target area must be made responsible for the project and its management. That is, the target area is accountable for the project's results. On the one hand, this sparks the mobilization we have been speaking of. On the other hand, this opens way for the target area to see the facilitator as a dependable resource for conducting the project. In particular, this means that the target area must designate a member to be the project manager. This person reports the project before the environmental management working committee. Only in extreme cases, when the target area cannot designate a project manager, a CAT facilitator may play that role, with the agreement of the environmental management working committee.

The third pre-requisite is *impartiality*. In order to facilitate its liaison role, the CAT team must not be demanded commitment to principles or practices other than: the organizational values, sustainability and ethics. Only so, they qualify to represent any group before others in necessary negotiations for enabling the implementation of strategic goals. For example, if a CAT facilitator realizes that a certain organizational policy must be changed, she makes a case for it before, say, the environmental management steering committee. Because of the assumption of impartiality, this act should not be interpreted as the CAT facilitator being contrary to organizational rules. Instead, her role is like that of a diplomat in, say, climate change summits. Another practical consideration is the CAT team should be impartial in their judgement and conduct, and their primary goal should be facilitating sustainable goal implementation.

### 3.3.3 Benefits and limitations

The proposed approach has important benefits. First and foremost, it decreases resistance to change. This happens, on the one hand, because it asks the target area to try to change, not to change once for all. The project is an opportunity for discovery on how the strategy could work in the target area. On the other hand, the presence of the facilitator relieves the target

area of the burden of planning the tasks and searching for new practices and solutions by its own. Second, it leverages existing resources, such as the target area's operational expertise, and structures like the environmental management working committee as well. In particular, this committee assumes facilitating roles, like "opening doors" in the target areas and mediating conflicts at the (inter-)departmental level.

Concerning limitations, this approach works well in areas where employees are motivated to contribute to the organization in general, as it seems to be the case with the City. It has been successfully applied for operational work. In areas whose work is mostly creative or innovative, the approach may require some adaptation. Finally, to staff the team is a challenge in itself, because is not easy to find candidates with the whole set of skills.

## 4 Conclusion

Change is not easy. Change toward sustainable practices even less. As such, it is wise to remember the words of Rebecca Blank, Chancellor of the University of Wisconsin-Madison: “change requires skillful use of at least three characteristics: patience, persistence, and nimbleness<sup>47</sup>.” This research hopes to have contributed to make this process easier, as the catalysis approach addresses most aspects of effective strategic change preconized in the literature. His successful experience with the implementation of the catalysis approach to change gives the report’s author confidence that the City of Edmonton may significantly benefit from it, so increasing the likeliness of the City succeeding at implementing its sustainable strategy goals. If so, the catalysis approach may become one more foundation for success.



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