THE GREEN STREETS GAME: EVALUATING A COLLABORATIVE DESIGN TOOL FOR YOUTH PUBLIC ENGAGEMENT

by

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School of Community and Regional Planning

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Abstract

Youth engagement processes have traditionally been plagued both by society’s often dismissal of youth, and by applying inappropriate engagement strategies and mechanisms. The needs and preferences of young people are different than those of adults, and therefore we cannot assume the same treatment (Talen and Coffindaffer 1999; Terrible 2000). This Masters professional project describes a novel approaches to youth engagement: the “Green Streets Game” (GSG). The GSG is a collaborative, urban design board game that was used in soliciting youth input during the planning of the Point Grey Road-Cornwall Ave Active Transportation Corridor (henceforth: PGCC) between March 2013 and April 2013. In all, 371 young people, aged 6 – 17, who attended elementary schools and high schools within the study’s corridor played the GSG and, thus, were involved in the engagement process.

The goals of this professional project are twofold: (1) to provide an evaluation of both the effectiveness of the GSG as a tool for youth engagement, and, (2) ‘The Green Streets Game PGCC Youth Engagement Report’ capacity to provide actionable information on their active transportation needs and design preferences for the City of Vancouver Engineering Services Department. In total three frameworks of evaluation are used to: I first evaluate whether the GSG has the capacity to effectively address the youth engagement goals of Rowe and Frewer’s (2005) Typology of Engagement Mechanisms. Second, I use Frank’s (2006) Five Lessons for Youth Participation to evaluate if the engagement tool addresses youth needs and preferences. To understand whether the GSG provided the City of Vancouver (CoV) Streets Department with actionable information on local youth active transportation needs, in August 2014 I
conducted a focus group with two City of Vancouver planning staff that are closely involved in the PGCC project.

Based on the evaluation, the GSG was deemed to effectively engage youth, meeting all of Rowe and Frewer’s engagement goals for the type of information flow model (Type 3 Participation) the GSG was intended to serve. The game performed moderately well in terms of its effectiveness as a youth engagement tool; it met most of Frank’s (2005) five lessons, but did not adequately adapt the sociopolitical context towards youth. In discussions with the two planning staff, it was agreed that the game performed well, but the game did not fully account for the real-life economic and legal constraints to planning new facilities. In conclusion, the staff indicated that the GSG youth report provided “eye opening” feedback and has successfully influenced design outcomes, and continues to inform neighborhood initiatives. Despite certain deficiencies, the evidence indicates the GSG effectively engages youth, suggesting that it could be an effective tool for youth engagement in future planning exercises.
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**Introduction**

Youth engagement processes have traditionally been plagued both by society’s often dismissal of youth, and by applying inappropriate engagement strategies and mechanisms. The needs and preferences of young people are different than those of adults, and therefore we cannot assume the same treatment (Talen and Coffindaffer 1999; Terrible 2000). For instance, youth tend to have a greater affinity for nature, “and favor interaction, diversity, and accessibility” (Talen and Coffindaffer 1999; Frank 2006). Moreover, if public engagement processes neglect to account for these differences between youth and adults, cities risk marginalizing young people from accessing public spaces and limit their mobility (Lennard and Lennard 2000; Meucci and Redmon 1997; Tonucci and Rissotto 2001; White 2001).

Canadian youth are becoming increasingly sedentary (Bruce and Katzmarzyk, 2002; Craig et al., 1999). The role of active transportation dramatically increases physical activity, which helps reduces obesity and the onset of type II diabetes among people under 18 (Appleyard, 2003; Anon, 1993; Cooper et al, 2003; Boarnet, 2005). If municipalities can adapt their public engagement process to meet the unique needs of youth, better health outcomes may be more achievable. While youth engagement strategies in active transport planning remain relatively underdeveloped, the City of Vancouver has recognized the need to engage younger people in planning processes, and has sought outside assistance in designing novel approaches to youth engagement.

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This Masters professional project describes one such initiative: the “Green Streets Game” (GSG). The GSG is a collaborative, urban design board game that was used in soliciting youth input during the planning of the Point Grey Road-Cornwall Ave Active Transportation Corridor (henceforth: PGCC) between March 2013 and April 2013. In all, 371 young people, aged 6 – 17, who attended elementary schools and high schools within the study’s corridor played the GSG and, thus, were involved in the engagement process.

The goals of this professional project are twofold: (1) to provide an evaluation of both the effectiveness of the GSG as a tool for youth engagement, and, (2) the ‘Green Streets Game PGCC Youth Engagement Report’s capacity to provide actionable information on their active transportation needs and design preferences for the City of Vancouver Engineering Services Department. The project also afforded the opportunity to document the GSG gameplay (please see Appendix E: GSG Facilitator Handbook). With respect to the first goal – evaluating the GSGs effectiveness as a youth engagement tool – two frameworks of evaluation are used: I first evaluate whether the GSG has the capacity to effectively address the youth engagement goals of Rowe and Frewer’s (2008) Typology of Engagement Mechanisms. Secondly, I use Frank’s (2006)
Five Lessons for Youth Participation to evaluate if the engagement tool addresses youth needs and preferences. To understand whether the GSG provided the City of Vancouver (CoV) Streets Department with actionable information on local youth active transportation needs, in August 2014 I conducted a focus group with two City of Vancouver planning staff that were closely involved in the PGCC project.

Based on the evaluation, the GSG was deemed to effectively engage youth, meeting all of Rowe and Frewer’s engagement goals for the type of information flow model (*Type 3 Participation*) the GSG was intended to serve. The game performed moderately well in terms of its effectiveness as a youth engagement tool; it met most of Frank’s (2006) five lessons, but did not adequately adapt the sociopolitical context towards youth. In discussions with the two planning staff, it was agreed that the game performed well, but the game did not fully account for the real-life economic and legal constraints to planning new facilities. In conclusion, the staff indicated that the GSG youth report provided “eye opening” feedback and has successfully influenced design outcomes, and continues to inform neighborhood initiatives. Despite certain deficiencies, the evidence indicates the GSG effectively engages youth, suggesting that it could be an effective tool for youth engagement in future planning exercises.
Existing Theories and Past Research

Why do public engagement?

While, decision-making in planning has been traditionally seen as a top-down, centralized, activity carried out by public officials (Krek, 2005), soliciting citizen engagement has long been identified as an important element in urban plan-making, since the plans invariably affect the lives of the citizens who live in a community (See Arnstein’s ladder of citizen participation Arnstein, 1969). IAP2, Fochler and Felt, and Hashengan identify at least two systems, one of community and governance (Haslett, 2012). The International Association For Public Participation (IAP2), Fochler and Felt, and Hashengan definition of engagement identify at least two systems, one of community and governance. Moreover, they express the role of engagement as facilitating interaction between these systems. Hashagen, for instance, argues the term “engagement” suggests a different sort of relationship between two systems, “a ‘governance’ system and a ‘community’ system” (2002). Acknowledging a community is a system composed of a palimpsest of social infrastructure is fundamental part of enabling productive interactions between the community and governance systems (Hashengen, 2002; Folcher and Felt, 2010). Fochler and Felt warns that an oversimplified ‘public,’ or community(s), is vulnerable to political machineries manufacturing ‘publics-at-large’ (2010). In other words, public engagement would fall back into the trap of the well-entrenched “linear model of science communication and its embedded values” that it “was hailed for breaking” (Fochler and Felt, 2010).

IAP2’s definition of engagement is explicitly wary of machined engagement processes and takes preventative measures by codifying its process with respect to engagement definitions, goals, clear sponsor commitments, public expectations and examples. The
association defines engagement within the concept of community governance, the “effective involvement and empowerment of local community representatives” in decision-making (AOHC, 2006). Accordingly, engagement is a method that enables community governance through processes “involving citizens at various levels of participation based on interpersonal communication and trust, and a common understanding and purpose.”

There are ethical and pragmatic reasons for an engaged relationship between the community system and governance system. In *Kitchen Table Sustainability*, Sarkissian (2008) provides two reasons for community engagement:

1) *It is ethical*: In democratic society, those whose livelihoods, environments, and lives are at stake should be consulted and involved in the decisions that affect them directly.

2) *It is pragmatic*: Support for programs and policies often depend on people’s willingness to assist the process. It is also often necessary because ‘if planners will not involve the citizens will involve themselves’.

**The Special Needs of Youth in Public Engagement**

Youth is a transitional life stage between childhood and adult stage. The use of age-based criteria or biological and psychological factors in defining youth is challenging, for it is widely inconsistent across the literature and in professional practice (Furstenberg, 2000; Galland, 2003; Gauthier, 2000: UN-Habitat, 2012). At the City of Vancouver (CoV), for instance, a person is considered a youth depending on the programming or policy context (i.e. recreational services, justice system, employment services) and subsequently the consideration of this life stage vary tremendously and may include those aged 9-24, 13-24, or 15-24 (COV, 2009). Overall, there are a multitude of factors that affect the transition in and out of the life stage ‘youth’ (Elder *et al*., 2005). For
practical purposes, this professional project engaged with individuals in high school, and younger, and therefore included people aged 18 and below.

The literature on youth engagement is much less developed than that of public engagement in general, perhaps because people under the age of 18 are just one subgroup of people with whom planners can engage. But engagement considerations that are unique to youth should be considered separately from those engagement considerations used on adult members, “the gap between the demands of planning processes and young people’s capabilities by building youth knowledge, skills, and confidence” (Baldassori et al. 1987; Lorenzo 1997; Checkoway et al. 2003). Moreover, the normative sociopolitical system is adult-centric and adaptation to a youth-friendly context is critical to effectively serve the needs of this demographic (Alparone and Rissotto 2001; Corsi 2002; Horelli and Kaaja 2002).

**Theories on how to Evaluate Youth Engagement Processes**

There are several theories on what constitutes “good” youth engagement, and these criteria can be used to evaluate whether an engagement process was successful. Paying homage to, Arnstein’s (1969) “ladder of participation”, Roger Hart’s (1992) “Ladder of Young People Participation” (see Figure 1: Roger Hart’s Ladder of Youth People Participation) puts forth a framework for identifying a continuum of youth participation (Shier 2001). Hart’s continuum identifies a threshold and eight “rungs” of participation, with any process below the fourth rung – *young people assigned and informed* – identified as tokenistic, and disqualified as “participation.” Hart’s model has been used extensively in youth engagement processes to help practitioners to identify, and eliminate, “non-participation” in their own practice (Shier 2001).
Hart’s model has, however, come under criticism. Criticism includes the notion that “Hart's ladder is bestowing of rights to the powerless and passive child by the powerful adult, an outdated model of rights.” (Montgomery, 2009). Franks (2011) remarks that the image of a ladder is unfortunate because “utilizes a hierarchical and non-participatory instrument in order to measure participation.” Therefore, the structure implies a ‘hierarchy of values’ that conflates higher degree of youth participation with optimal youth engagement (Franks, 2011; Reddy and Ratna, 2002; Hart et al, 2004). Orsini (2010) illustrates there are “valid instances where each of the participatory levels can
provide” an appropriate level of participation or engagement. For instance, young people assigned and informed (Hart’s 4th rung), provides an appropriate level of participation for a ‘School Walk Around’ whereby students are given a task to assess the traffic and safety conditions around their school. Higher rungs, where youth and adults are equals and jointly construct plans may be unnecessary, since the purpose of a school walk around is for students to use their local knowledge to inform adult planners of the issues that affect them before coming up with an action strategy. In this case, a “requirement” for youth and adults to jointly build knowledge would be unnecessary to the original task.

Participatory Action Research (PAR) is considered among the ‘best practices’ for youth evaluative frameworks (Cathy and Nancy, Pereira 2011: Stephens, 2009). PAR engages participant youth as co-evaluators, or co-inquirers, of the engagement process, and this relationship continues until the final outcome of the project is delivered (Stephens, 2009; Baezconde-Garbanati, 2013). Process-oriented engagement models, like the Empowering Education Model (EEM), illustrate the value and challenge of PAR. EEM is a pedagogical framework that stresses reaching process goals, such as building self esteem subjects who are involved for process-oriented goals, such as: building self-esteem and new understandings/perspectives, rather than outcome-oriented goals, such as built improvements or policy changes (Freire, 1970). Freire (1970) considers process-oriented goals to enact deeper, and more lasting social change compared to processes that are more outcome-oriented, but the challenge with process-oriented processes is that engagement processes can become very long term commitments, with many steps along the way, such as building self-esteem or participation in community organizing efforts (Wallerstein and Bernstein, 1988).
Rowe and Frewer’s (2005) Typology of Engagement Mechanisms:

Hart’s (1972) model has been deconstructed by Orsini (2010) because the metaphor implies a hierarchy to youth engagement processes, and that there is a “right” way of doing engagement. While there may be no one “right” way to engage the public, what framework exists that can provide guidance on whether an engagement style might be better than another in a certain context? Rowe and Frewer (2005) come perhaps the closest to providing this guidance with their Typology of Engagement Mechanisms.

Central to Rowe and Frewer’s framework is a definitional understanding of what engagement is: engagement to Rowe and Frewer is the flow of information between a public and a sponsor. The direction of information flow – whether primarily from the sponsor to the public, or from the public back to the sponsor, or bi-directional – defines the engagement realm (see Table 1). Only after the engagement realm has been identified based on the flow of information (also known as the ‘Information Flow Model’, or IFM), can an appropriate mechanism (see Appendix A) be identified. The mechanism, or tool of engagement, can then be evaluated according to certain “mechanism variables” (Table 2). These are criteria that directly relate to the goals of the engagement process. If the goals are known, each tool can be assessed as to whether it is congruent or incongruent with the mechanism variables of the engagement process.

This stepwise procedure to identifying an appropriate tool, and to evaluating the tool according to the goal of the overall engagement process, was the most robust procedure for assessing the efficacy of public engagement processes that I encountered.
in my search of the literature. For this reason, I have chosen to use Rowe and Frewer’s (2005) model as the framework for evaluating the GSG.

More detail on how Rowe and Frewer’s framework was applied is detailed in Section 4 (see ‘Evaluation Methods’).
### Table 1: Realms of Public Engagement (Adapted from Rowe and Frewer-2005)

<table>
<thead>
<tr>
<th>Public Engagement Realm</th>
<th>Information Flow Model (IFM)</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Public Communication</strong></td>
<td><img src="image" alt="Flow of Information" /></td>
<td>One-way flow of information from the sponsor to the public (e.g. Radio broadcasts, Cable TV (not interactive) Drop-in centers (open-house, drop-in center, one-stop shop, first-stop shop, exhibitions).)</td>
</tr>
<tr>
<td><strong>Public Consultation</strong></td>
<td><img src="image" alt="Flow of Information" /></td>
<td>One-way flow of information from the public to the sponsor (e.g. Focus group Open space Opinion poll Referendum (various types) Study circle Survey Telepolling/Televoting)</td>
</tr>
<tr>
<td><strong>Public Participation</strong></td>
<td><img src="image" alt="Flow of Information" /></td>
<td>Information flows both directions and the content of the information changes in response to the information (e.g. Citizens’ jury Consensus conference Deliberative opinion poll Negotiated rulemaking Planning cell Task force).</td>
</tr>
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Table 2: Mechanism Variables of Engagement Processes (Adapted from Rowe and Frewer-2005)

<table>
<thead>
<tr>
<th>Mechanism Variables</th>
<th>Levels of Variable</th>
<th>Definition</th>
<th>Example</th>
</tr>
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<tr>
<td>Selection Method:</td>
<td>Uncontrolled or Controlled Selection</td>
<td>In controlled selection, both the number and relevance of those engaged may be determined (in theory), whereas in uncontrolled selection, this is not the case, and even if the actively engaged are higher in number, many of these may be inappropriate (the sample may be biased). As such, controlled selection may be more likely to maximize the relevant population.</td>
<td>Controlled Selection: referenda (consultation), and citizen juries (participation). Uncontrolled Selection: include drop-in centers (communication),</td>
</tr>
<tr>
<td>Elicitation Facilitation:</td>
<td>Yes, No or NA</td>
<td>Each active participant in an engagement exercise can be considered to possess a quantity of relevant information regarding the problem in hand (whether this is knowledge or simply an opinion) as well as other information of no relevance. An effective exercise needs to elicit all relevant information from each active participant while not eliciting irrelevant or spurious information. Should appropriate information remain unelicited or be confounded or confused by irrelevant information, effectiveness will be negatively affected.</td>
<td>Yes: focus groups and citizen juries. No: co-option and public meetings. NA: Information broadcasts (“publicity” via television, newspaper, and/or radio)</td>
</tr>
<tr>
<td>Response Mode:</td>
<td>Open, Closed, or NA</td>
<td>Mechanisms that only allow respondents to choose among two or more options (e.g., referenda or a survey requiring ratings on a scale or set questions) are “closed,” whereas those that allow free responses (e.g., focus groups and conferences) are “open.”</td>
<td>Closed: referenda or a survey requiring ratings on a scale or set questions. Open: Focus Group, NA: Radio Broadcast</td>
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</table>
Continued-Table 2: Mechanism Variables of Engagement Processes (Adapted from Rowe and Frewer-2005)

<table>
<thead>
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<th>Levels of Variable</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information Input:</strong></td>
<td>Set, Flexible, or NA</td>
<td>The sponsors responsible for initiating engagement exercises invariably assume that any information provided by them is relevant, comprehensive, and appropriate for public understanding and decision-making. Flexible information inputs may be more likely to result in maximized relevant sponsor information than set-information mechanisms, in the sense that they enable the public participants to identify holes in the information and to clarify uncertainties (e.g., when the information is full of technical jargon).</td>
<td>Set: newsletters and leaflets. Flexible: telephone hotlines and public meetings. NA: Opinion poll, Referendum, Survey, Telepolling/voting</td>
</tr>
<tr>
<td><strong>Medium of Information Transfer:</strong></td>
<td>Face-to-Face (FTF) or Non-Face-to-Face (Non-FTF)</td>
<td>The aim of engagement is to acquire all relevant information from all relevant members of the population (sources) and transfer this to relevant recipients (be these the sponsors or the participants). A mark of the efficiency of transfer is whether the recipients fully understand that information (i.e., process it). The most significant variable in this respect is the medium of information transfer. There are advantages and disadvantages to FTF and Non-FTF.</td>
<td>FTF: Focus group, Information Centers. Non-FTF: hotline/helpline, teleconferencing, mailed surveys</td>
</tr>
<tr>
<td><strong>Facilitation of Aggregation:</strong></td>
<td>NA, Unstructured, or Structured</td>
<td>The aggregation process is structured following certain rules (even if certain data are discarded, there is generally a need to justify this). On the other hand, when values are elicited from groups, the output itself represents an aggregation performed within and by the group. It is unstructured in the sense that no clear rules are set out and followed, and equity, or input from all participants, is not guaranteed.</td>
<td>Structured: brainstorming, causal impact diagrams, ranking, timelines, community maps. Unstructured: no clear rules are set out and followed.</td>
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Frank’s Five Lessons for Youth Participation

Apart from evaluating whether engagement processes was effective, it is also important to understand whether this engagement process was particularly effective at engaging youth. Results-Based Management (RBM) frameworks are traditionally “positivist in their leaning, focusing on fixed, controlled designs, quantitative data, objective analysis, and linear attribution (cause and effect) between activities and desired outcomes” (Stephens 2009). While funders tend to prefer the tangible and quotable’ results, “attitudinal or behavioral shifts inherent in public engagement” has poorly captured by RBM frameworks (Stephens 2009). Theories on Participatory Action Research (PAR) describe how to evaluate engagement processes as they are occurring. PAR posits that “a system of inquiry, and power are bound up together” (Pine, 2008); thus, reality is discursive and when a participative mind articulates their reality, they are articulating “the paradigm itself, and can, in principle, reach out to the wider context of that paradigm to reframe it” (Heron and Reason, 1997). Therefore to measure effectiveness at the pre-planning stage, and throughout the process, participants must be incorporated into iterative evaluative processes like “experience, reflection, [learning-by-doing] and action planning” (Stephens 2009).

However, PAR does not provide a template for evaluating engagement effectiveness after an engagement strategy has concluded. The CoV requested evaluative metrics that transparently communicated engagement outcomes related to the youth design preferences and quantity of local youth engaged. Since the GSG’s effectiveness as an a youth engagement tool was beyond the scope CoV contract, and only considered by author after gameplay ended, a framework for doing post-game evaluation was necessary. Additionally, a framework was needed that assessed how actively youth were engaged, as opposed to how well a general public (presumably adults). Frank (2006) provides some guidance on how to engage youth. Frank defines youth as either
“18 years old or younger” or “the ages typically enrolled in elementary, middle, and high school grades” (2006); and summarizes the findings of “direct-observation studies of youth participation in community and environmental planning,” (2006) from which identifies five “lessons” – or procedural practices – for evaluating whether youth were empowered in processes (Table 3).

Frank argues that conventional sociopolitical contexts are not oriented towards youth engagement; so adapting the context to youth participation is critical. To do so, she encourages “youthful styles” of participation, which elicit deeper engagement and tends to facilitate dynamic, interactive, social, expressive, challenging, and constructive environments. Giving ‘greater responsibility and voice,’ or autonomy, to youth tends to ignite intrinsic motivations and further enhances their participation. The roles of adults in these processes include providing advocacy for youth voices when confronted by non-receptive decision-makers, accessing resources, and building youth competencies. Youth competencies can be augmented, for instance, by guided walking tours informing deficient neighborhood knowledge due to a “lack of independent mobility” or teach strategies to exercises a balance of creativity and reality (Frank, 2006).

Franks’ (2006) framework for evaluating how successfully youth were engaged was chosen because it is specific to youth engagement, and because it is suitable for evaluating processes that happened in the past. More detail on how Franks’ framework was applied is detailed in Section 4 (see ‘Evaluation Methods’).
Table 3: Frank’s Five Lessons for Youth Participation Evaluative Framework (Adapted from Frank 2006)

<table>
<thead>
<tr>
<th>Lessons for Youth Participation</th>
<th>Procedural Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Give Responsibility &amp; Voice</strong></td>
<td>How did adults share power?</td>
</tr>
<tr>
<td><strong>Build Capacity</strong></td>
<td>How was youth knowledge augmented?</td>
</tr>
<tr>
<td><strong>Encourage Youthful Styles</strong></td>
<td>How were youth socially engaged?</td>
</tr>
<tr>
<td><strong>Involve Adults</strong></td>
<td>How were adults involved?</td>
</tr>
<tr>
<td><strong>Adapt the Sociopolitical Context (Pre, Intra, &amp; post)</strong></td>
<td>Did the sociopolitical context adapt?</td>
</tr>
</tbody>
</table>
The Role of Game Play in Youth Engagement Processes:

Games are an opportunity to solve problems and encourage capacity building in an inclusive manner (Thatcher, 1990). This is because games are an abstraction of reality whereby complex systems are easier to explore and opportunities to try unfamiliar solutions are riskless (Kapp, 2012; Novak and Hoffman, 2009). Accordingly, this medium is a treasure trove of tools for individual and community development (Barta and Schaelling, 1998). For instance, a game is a shared experience, and thus it can reinforce relationships and bridge gaps between players’ divergent lived-experiences (Skoumpourdi and Kalavassis, 2007). With respect to inclusive decision-making, in collaborative games all players are “unified and share the rewards or penalties of their decisions” (Delgado, 2014). Thus promoting strategies that demands collaborative decisions (Radner & Marschak, 1972; Zagal et al., 2006).

A strong indicator of effective game design is enabling an immersive and effortless state of focused engagement known as ‘Flow’ (Mihaly Csikszentmihalyi, 1991). Game mechanics enable players to ‘Flow’ carefully balanced intrinsic and extrinsic motivations (Lepper, 1988). Game mechanics are the ‘components’ of a game such as turns, cards, scenario, aesthetics, points, and leaderboards. Particular configuration of game mechanics where increasing player competence is by matched increasing challenge (Kapp, 2012). A curve of interest illustrates this degree of focused engagement a player experiences throughout the gameplay (Kapp, 2012). This is because a player cannot maintain focused play, if a gameplay’s level of interest is not stable or increasing (Kapp, 2012). Thus this descriptive model is helpful in mapping the careful application of game thinking through the gameplay.
The Point Grey Road-Cornwall Avenue Active Transportation Corridor Project

The Point Grey Road-Cornwall Avenue Active Transportation Corridor Project aims to create a safe, convenient and comfortable connection for pedestrians and cyclists between Burrard Bridge and Jericho Beach. Public consultation occurred between January and May 2013. Council approved of the project in July 2014 and construction was complete by April 2014. The CoV sought public input regarding design preferences, and route selection. The GSG was implemented between March and April of 2013 as part of a parallel youth focused engagement process. Council approved of the project in July 2014 and construction was complete by April 2014. The final design provides a continuous connection between the Burrard Bridge and Jericho Beach through the

Source: Active Transportation Corridor: Seaside Greenway Completion and York Bikeway (Phase 1 of Point Grey-Cornwall Active Transportation Corridor) - 10182 Final staff report (July 23, 2013) July 16, 2013

Specific Study Areas:

(1) Point Grey Rd West of Alma
(2a) Point Grey Rd (Alma to Macdonald St.) option a
(2b) Point Grey Rd (Alma to Macdonald St.) option b
(3) Point Grey Rd: Macdonald to Balsam
extension and creation of the Seaside Greenway and York Bikeway. Design interventions included road closures, separated bike lanes, new walk/bike signal, signage, and wider sidewalks.

More importantly, the CoV outlined certain public engagement goals it wished to fulfill during the public consultation process. Namely, any engagement tool had to provide CoV staff with “actionable” information – information that they could easily turn into a buildable design element. It also had to comprehensively engage youth from the surrounding area on alternative street designs. However, what was missing was a method for evaluating whether youth were comprehensively engaged.

Figure 3: Study Area and Participating Schools
The Green Streets Game

The GSG is a collaborative public space board game that was implemented as part of the PGCC youth engagement strategy. GSG carefully applies game thinking to make active transportation design elements and concepts accessible and promote inclusive decision-making through a collaborative process. The game is collaborative by design; reaching consensus is engineered as the best way to win and all players share in the rewards and risks. A participant-driven design, players brainstorm to determine the “win” scenario in teams and imagine how neighborhood streets should be redesigned. As individuals, players then vote for their preferred design.

The CoV sought feedback from local youths regarding their active transportation needs and aspirations or ‘Fun, Safe, and Easy’ design principles expressed their design preferences by redesigning ‘boards’ or neighborhood ‘maps’ containing local street typologies (Fig. 5). 371 local youth attending Kitsilano Secondary, Bayview Elementary, General Gordon Elementary and Henry Hudson Elementary (Figure 4 & Figure 3). A summary of the redesigned maps was then compiled and described in a report to decision-makers.
Figure 5: Team Board
Evaluation Methods

Research Question

Was the Green Street Game successful at satisfying the Point Grey-Cornwall Corridor Project’s youth engagement goals?

Goal 1) Did the GSG comprehensively engage youth on alternative street design?
   a. provide a valuable learning opportunity?
   b. support youth decision-making?

Goal 2) Provide the City of Vancouver with actionable information derived from the workshops with youth.
   a. Did the GSG provide CoV staff with actionable information?
   b. Did the GSG report influence the PGCC project?

The purpose of this project was to evaluate whether the GSG comprehensively engaged youth and provided the CoV with actionable information for the PGCC planning process. These were the engagement goals of the PGCC planning process, established by the CoV at the outset of the planning process. Ideally the evaluative frameworks should include the active and early participation of local youth, but the decision to evaluate the application of the GSG to the PGCC occurred post-engagement. Accordingly I will do the following to evaluate the overall research goals;

1. The first analytical framework I will use is Rowe and Frewer’s *Typology of Engagement Mechanisms*. Their typology provides a rubric and thus evaluative framework that will determine the ‘effectiveness’ of the GSG at facilitating a flow of information, between the CoV and local youth that addresses the PGCC project youth engagement goals.
2. Subsequent evaluations will address the research questions separately and sequentially. To evaluate the first of the CoV goals two frameworks will be employed; I use Frank’ (2006) *Five Lessons for Youth Participation* to evaluate how well youth were engaged and the potential short-term impact of those decisions;

3. A SWOT analysis informed by a focus group with planners involved in PGCC Corrdor will address the second research question: whether GSG reports provide the CoV with actionable information.

**Rowe and Frewer: Typology of Engagement Mechanisms**

As mentioned in Section 2 (*see* Existing Theories and Past Research), Rowe and Frewer’s (2008) typology of engagement mechanisms is used to determine how ‘effective’ the GSG is at facilitating a flow of information between the CoV and local youth. The purpose of this evaluation is to see whether the PGCC project addressed the CoV’s youth engagement goals. As previously mentioned, Rowe and Frewer’s framework was selected because it identifies the appropriate engagement tools to meet certain contexts, and provides a useful rubric for evaluating whether the tool was effective in that context. Based on the goal of providing a valuable learning opportunity for area youth, and building the capacity for youth decision-making (see Research Question box), Rowe and Frewer’s (Table 1), or “public participation”, would best apply to the youth engagement goals of the CoV. Public participation is characterized by a two-way flow of information from the sponsor (the City) and the public (the youth of the PGCC).
In the next step, I compared the GSG’s mechanism variables to the information flow models of the 14 classes of mechanisms. If the information flow model variables of the GSG are consistent with ‘type 3 participation’ and incongruent with the remaining classes, the mechanism had the capacity to effectively address the youth engagement goals. The results are summarized in Table 5, where each of the 14 mechanism classes is assessed by their congruence/incongruence to each of the mechanism variables. I determined that participation should be limited to those knowledgeable of youth active transportation design preferences, thus the “public” should be limited in scope to local youth. Again since local youth contain relevant information “elicitation facilitation” should be conducted. The engagement goal of ‘comprehensive engagement’ would be served by an open response mode. Providing a valuable learning experience meant clarifying misunderstanding and jargon, and therefore a flexible information input would best serve the participants by maximizing relevant information. A valuable learning experience would be maximized by face-to-face engagement, as it would ensure “whether the recipients fully understand [the] information.” Finally providing actionable information required information to be summarized and represented in consistent manner: thus aggregated in a structured manner. It was determined that Participation Type 3 met all of Rowe and Frewer’s mechanism variables, and was the appropriate engagement mechanism by which to evaluate the GSG (see Table 4).
### Table 4: Characteristics of Participation Type 3, the chosen engagement mechanism for the GSG Evaluation

<table>
<thead>
<tr>
<th>Mechanism Class &amp; Type</th>
<th>Type 3 Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simplified Information Flow Model</strong></td>
<td>![Flow of Information Diagram]</td>
</tr>
<tr>
<td><strong>Mechanism Variables</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Selection Method:</strong></td>
<td>Controlled-Uncontrolled</td>
</tr>
<tr>
<td>Controlled</td>
<td></td>
</tr>
<tr>
<td><strong>Elicitation Facilitation:</strong></td>
<td>Facilitated</td>
</tr>
<tr>
<td>Yes-No</td>
<td></td>
</tr>
<tr>
<td><strong>Response Mode:</strong></td>
<td>Open-Closed</td>
</tr>
<tr>
<td>Open</td>
<td></td>
</tr>
<tr>
<td><strong>Information Input:</strong></td>
<td>Set-Flexible</td>
</tr>
<tr>
<td>Flexible</td>
<td></td>
</tr>
<tr>
<td><strong>Medium of Information Transfer:</strong></td>
<td>Face-to-face/Non-Face-to-face</td>
</tr>
<tr>
<td>Face-to-face</td>
<td></td>
</tr>
<tr>
<td><strong>Facilitation of Aggregation:</strong></td>
<td>Structured-Unstructured</td>
</tr>
<tr>
<td>Structured</td>
<td></td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>This mechanism uses various decision aids to ensure structured consideration and assessment, and hence aggregation, of opinions. This mechanism is characterized by the controlled selection of participants, facilitated group (FTF) discussions, unconstrained participant responses, and flexible information input from the sponsors (depending on the capacity of the participants), often in the form of “experts” who are available for questioning by the public participants. Information that structured when aggregated.</td>
</tr>
</tbody>
</table>
Table 5: Congruency & Incongruence of the GSG to Rowe and Frewer’s (2005) Mechanism Variables

(Mechanism Variables: CON = congruent, INC = Incongruent)
(Information Flow Model Congruence: EFF = Effective INEFF = Ineffective)

<table>
<thead>
<tr>
<th>Mechanism Class</th>
<th>Mechanisms</th>
<th>Selection Method</th>
<th>Elicitation Facilitation</th>
<th>Response Mode</th>
<th>Information Flow Model Congruence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication type 1</td>
<td>Information broadcasts (&quot;publicity&quot; television)</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Communication type 2</td>
<td>Public hearings/meetings (questions &amp; answers)</td>
<td>INC</td>
<td>INC</td>
<td>CON</td>
<td>INC</td>
</tr>
<tr>
<td>Communication type 3</td>
<td>Drop-in centres, TV (not interactive), Internet Info</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Communication type 4</td>
<td>Hotline</td>
<td>CON</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 1</td>
<td>Opinion poll, Referendum, Survey, Telepoll/voting</td>
<td>CON</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 2</td>
<td>Consultation document</td>
<td>CON</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 3</td>
<td>Electronic consultation (interactive Web site)</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 4</td>
<td>Focus group</td>
<td>CON</td>
<td>CON</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 5</td>
<td>Study circle, Open space</td>
<td>INC</td>
<td>CON</td>
<td>CON</td>
<td>INC</td>
</tr>
<tr>
<td>Consultation type 6</td>
<td>Citizen panel—group based (e.g., health panel)</td>
<td>CON</td>
<td>CON</td>
<td>INC</td>
<td>CON</td>
</tr>
<tr>
<td>Participation type 1</td>
<td>Action planning workshop, Citizens’ jury</td>
<td>CON</td>
<td>CON</td>
<td>CON</td>
<td>INC</td>
</tr>
<tr>
<td>Participation type 2</td>
<td>Negotiated rule making, Task force</td>
<td>INC</td>
<td>INC</td>
<td>CON</td>
<td>INC</td>
</tr>
<tr>
<td>Participation type 3</td>
<td>Deliberative opinion poll, Planning cell</td>
<td>CON</td>
<td>CON</td>
<td>CON</td>
<td>CON</td>
</tr>
<tr>
<td>Participation type 4</td>
<td>Town meeting (New England model) with voting</td>
<td>INC</td>
<td>INC</td>
<td>CON</td>
<td>CON</td>
</tr>
</tbody>
</table>
Apart from using frameworks to evaluate how successfully the GSG engaged youth, I supported my evaluation of the game’s effectiveness by running a focus group with two CoV planners who were directly involved in the PGCC planning project and participated as GSG facilitators. These two CoV planners were selected based on familiarity with all three phases the GSG in the PGCC planning; (1) the adaptation of the GSG process during pre-engagement; (2) the implementation of the youth engagement events; (3) as well as, received the GSG PGCC Youth Engagement Report and for subsequent integration into the final corridor design proposal.

The results were captured in a SWOT analysis (See Appendix C for focus group questions). The intention was to understand the internal and external factors that affected the GSG ability to provide actionable information to the CoV and enabled youth to influence the PGCC planning project. A SWOT analysis provides contextual awareness. This simple and effective analytical framework can determine where change is possible or necessary. ‘Strengths’ and ‘Weakness’ provide an internal assessment, and ‘Opportunities’ and ‘Threats’ identity eternal factors. In other words, understanding the internal and external factors that affected the GSG ability to provide actionable information and enable youth to influence the PGCC planning project.
Results

**Evaluating the effectiveness of the GSG as an engagement tool**

The GSG met all the criteria pertaining to an effective Type 3 Mechanism according to Rowe and Frewer (2005), my assessment is that the GSG was an effective engagement tool for the purposes it was meant to serve. The purpose being, conduct comprehensive youth engagement on active transportation design preferences and provide the CoV with actionable information.

**Participant Selection: Controlled**

The selection of participants for Type 3 processes should first be *controlled*. That is, the number of participants and where they come from should be pre-determined by the researchers/facilitators according to the objectives of the process. Since the objective was to receive feedback specifically from local area youth about the implementation of a transportation plan, participation was only open to secondary and elementary students, typically age 18 and below, who attended the schools within the PGCC corridor area: Kitsilano Secondary, Bayview Elementary, General Gordon Elementary and Henry Hudson Elementary (See Figure 3). Moreover, teachers had to provide legal assent to the youth engaging in the process. Subsequently teachers’ inviting the GSG also controlled for participant bias derived from self-selection.

**Elicitation Facilitation: Yes**

Type 3 processes also ought to be facilitated processes, and Rowe and Frewer (2005) argue that care should be taken to elicit only relevant information, and not irrelevant, or “spurious” information (see Table 2), since this risks wasting time and eroding confidence in the process. The GSG was a facilitated process where a lead
facilitator and five team facilitators would engage 21-32 youth in teams of 4-7 players. Facilitator’s backgrounds included strong understandings of active transportation and facilitation based on a combination of education, (graduate level degrees in urban planning, or engineering) and experience. Lead facilitators were intimately familiar with the GSG as they co-designed the game. Team facilitators were provided with verbal and visual instructions (Figure ) prior to the gameplay. Spurious information was minimized by using various game mechanics and facilitation techniques like scaffolding instructions, prompting players with consistent and simple design language, using visual aids like the design cards and the board itself, and incentivizing collaborative behaviour through loss aversion.

Response Mode: Open
GSG gameplay involved asking youth open-ended questions in three areas of the gameplay; the ‘Intro & Brainstorm,’ the ‘Mini-Street Design,’ and the ‘GSG Team Street Transformation.’ When the youth responded they had to dialogue with the others and eventually illustrate the process through which players are introduce gave kids scenarios to solve on cards. They had to think about what these scenarios

<table>
<thead>
<tr>
<th>Figure 5: Excerpt from the GSG Facilitator Handbook: ‘Intro &amp; Brainstorm’</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Write ‘Livability’ on the board and break it to ‘live.’</td>
</tr>
<tr>
<td>i. Ask players ‘What do they need to live in their community?’</td>
</tr>
<tr>
<td>ii. After several ideas have been written on the chalkboard by the scribe follow-up with ‘how can the street help you achieve what you need to live?’</td>
</tr>
<tr>
<td>iii. Then prompt players with the notion of ‘Fun, Safe and Easy’ design principles. (i.e.’ what would be ‘fun’ way to achieve that livability goal?’ or ‘how do you think we could make that great idea ‘easier?’)</td>
</tr>
</tbody>
</table>
represented for them and respond accordingly. When they responded, they had to do so by actively engaging in dialogue with the other participants, soliciting other team member’s opinions and interpretations of the scenario. The facilitators asked the players to decide amongst themselves who had the best idea. They then voted on the best idea.

In the “Brainstorm”, players participated in an open-ended deliberation, which framed the subsequent gameplay (Figure 5). Figure 5 is an excerpt from the GSG Facilitator Handbook that outlines how a facilitator is to prompt the brainstorm players to share in an open format. This open-ended activity defined how a team can win because in it players collectively expressed what will persuade their vote, their personal active transportation design preferences.

In the ‘Mini-Street Design’ phase we introduced youth to diverse street typologies and introduced them to the GSG design tools. Players were encouraged to use the design tools to respond in open-ended manner. Figure 5 demonstrates how facilitators elicit open-ended feedback when intro during the design tools. In the ‘GSG Team Street Transformation,’ the team design phase, players were given numerous scenarios to needed openly respond to through collaborative design (See Figure 8).
Figure 5: Excerpt from the GSG Facilitator Handbook: ‘Mini-Street Design’

4. Team Facilitators are to ask students to draw “how they could make their own street more Fun, Safe, and Easy.” Use the ‘Mini Street’ located at the end of the booklet. Instead of providing all the instructions before starting, get players started drawing and progressively intro instructional prompts. Mini Street Design Prompts:
   i. **Brainstorm**: Refer players to the brainstorm of design principles for ideas and directions
   ii. **Grid Pattern**: Ask players why does the street have a grid pattern? Encourage them to consider the reality of limited space and tradeoffs.
   iii. **Design Cards**: Place half a deck of Design Cards in the center of the table and distribute 2 cards to every player. The Design Cards are examples Urban Design Elements players may consider including in their street design.
   iv. **Scenario Cards**: If time allows, recite one of the Scenario Cards. Players will most likely not have enough time address it, but it will better prepare for ‘live gameplay.’

Figure 8: GSG Sample Scenario Card

#1a: Scenario Card

*(Read Aloud)*

Sarah/Thomas is a grade (elementary) ____ student at _________ School. Every morning her mom drives the 8 blocks to school, and after class she walks home with friends. Sarah and her friends have decided that they want to ride their bikes to school, but their parents are concerned. They say that the neighbourhood roads are too narrow, and they are also worried about crossing the busy street next to their school. Re-imagine the streets so they’re safer for Sarah and her friends to bike to school.

At the end of the activity, your facilitator will be evaluating your work and sharing key points with the whole class. Extra points for making the street more fun!

**Focus**: Bike safety, friends, schooldays

[www.GreenStreetsGame.com](http://www.GreenStreetsGame.com)
Information Input: Flexible

Information input was flexible so that the limited time available for youth engagement could be maximized. Instead of sticking to rigid scripts, facilitators maximized relevant information transfers by adapting to the youth capacities with respect to knowledge and dialogue. For instance the ‘Mini-Street Design’ phase players learn about various typologies of street design. Instead of providing a lecture, facilitators adapted the format based on the response to the visual aids and questions such as: “what types of roads do you have in your neighborhood?” “how are they different?” and “which moves the most people?” If player capacity required additional support facilitators could input additional information. In brief, players’ need determined how information inputs were adjusted to optimize relevant information transfers.

Medium of Information Transfer: Face-to-Face

Face to face information transfer are best suited to provide, the CoV youth engagement goals; to provide a comprehensive learning experience that was valuable and contributed to youth influencing decision-makers. The GSG is a collaborative team based board game that requires players to attend in person so that they may dialogue and interact with sponsor representatives, the GSG or CoV staff facilitators.

Facilitation of Aggregation: Structured

Actionable information is information that is structured in a useful manner. Structured aggregation maximizes relevant information by observing a systematic method of data aggregation. We assimilated and represented the data in various structured manners with the intention of providing the CoV with relevant information. First by summarizing
frequency of design features by street typology (i.e. bikes lanes, neighborhood streets, and intersections). Figure 9 provides an example of the GSG’s structured aggregation and representation of youth feedback. For additional examples please see Appendix B and Figure 11-13.

In summary, the GSG provided congruent mechanism variables with the PGCC Planning Projects youth engagement goals and therefore and has the capacity to provide effective engagement.

**Figure 9: GSG Example of Structured Aggregation**

Evaluating how successfully the GSG engaged youth

Franks’ (2006) framework provides Five lessons, each with specific sub-questions that evaluators can use to assess how successfully a project engaged youth. The GSG was evaluated according to these criteria, and the results are presented in Table 8- (Summary infographic also available (Figure 10: GSG Gameplay Summary- Infographic).
Table 6: Evaluating the Effectiveness of the GSG According to Rowe and Frewer (2005)

<table>
<thead>
<tr>
<th>Criteria for Evaluation</th>
<th>Mechanism for Evaluation</th>
<th>GSG Characteristics</th>
<th>Did the GSG meet Rowe and Frewer’s Criteria?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanism Class</td>
<td>Type 3 Participation</td>
<td>No self-selection bias by students; Participants were controlled based on their attendance local schools and their teacher’s request, not participant self-selection.</td>
<td>N/A</td>
</tr>
<tr>
<td>Simplified Information Flow Model</td>
<td>Flow of Information</td>
<td>The sponsor, the CoV via the Green Streets Game, engaged in a multi-directional flow of information with the public of local youth. The Sponsor communicate the transportation context, and the public responded by conveying design preferences.</td>
<td>N/A</td>
</tr>
<tr>
<td>Variables for Evaluation</td>
<td>Variables for Evaluation</td>
<td>Variables for Evaluation</td>
<td>Did the GSG meet Rowe and Frewer’s Criteria?</td>
</tr>
<tr>
<td>Selection Method:</td>
<td>Controlled</td>
<td>No self-selection bias by students; Participants were controlled based on their attendance local schools and their teacher’s request, not participant self-selection.</td>
<td>YES</td>
</tr>
<tr>
<td>Elicitation Facilitation:</td>
<td>Facilitated</td>
<td>We sought input through face-to-face facilitation</td>
<td>YES</td>
</tr>
<tr>
<td>Response Mode:</td>
<td>Open</td>
<td>The game is participant driven and open to their interpretation in the brainstorm, the street design, they determined where, how much, and what to put. We had to expand our design features from 50 to 97 to capture their open responses.</td>
<td>YES</td>
</tr>
<tr>
<td>Information Input:</td>
<td>Flexible</td>
<td>We wanted to make sure were clarifying thing and maximizing time. In brainstorm and streets 101 we limited introduction of topics and terms, but sought their interpretation but were willing fill any gap.</td>
<td>YES</td>
</tr>
<tr>
<td>Medium of Information Transfer:</td>
<td>Face-to-face</td>
<td>It is a workshop that occurred in classrooms</td>
<td>YES</td>
</tr>
<tr>
<td>Facilitation of Aggregation:</td>
<td>Structured</td>
<td>We assimilated and represented the data in a structured manner. First by summarizing frequency by design feature and street typology. Representing based various ways please Appendix B.</td>
<td>YES</td>
</tr>
</tbody>
</table>
Table 7: Summary of the GSG's Adherence to Frank's Lessons for Youth Participation

(The percentages are the proportion of procedural questions per lesson adhered to across the various sub-mechanism or phases of the gameplay.)

<table>
<thead>
<tr>
<th>Sub-Mechanism (or ‘Phase’)</th>
<th>INTRO &amp; BRAINSTORM</th>
<th>MINI STREET DESIGN</th>
<th>SHARE BACK</th>
<th>GREEN STREET TEAM TRANSFORMATION!</th>
<th>PRESENTIONS &amp; VOTE!</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give Responsibility &amp; Voice</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Build Capacity</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>33%</td>
</tr>
<tr>
<td>Encourage Youthful Styles</td>
<td>83%</td>
<td>83%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Involve Adults</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Engagement Phase**

<table>
<thead>
<tr>
<th>PRE-ENGAGEMENT</th>
<th>INTRA-ENGAGEMENT</th>
<th>POST-ENGAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapt the Sociopolitical</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>
Figure 10: GSG Gameplay Summary-Infographic
Table 8 Evaluation of Youth Engagement Effectiveness (Lesson 1: Giving Responsibility and Voice)

<table>
<thead>
<tr>
<th>PROCEDURAL QUESTIONS: Giving Responsibility and Voice</th>
<th>INTRO &amp; BRAINSTORM</th>
<th>MINI STREET DESIGN</th>
<th>SHARE BACK</th>
<th>GREEN STREET TEAM TRANSFORMATION!</th>
<th>PRESENTIONS &amp; VOTE!</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How did adults share power?</td>
<td>The ‘brainstorm’ is based on the input of youth and it determines the criteria to win/objective of the game. Therefore adults share power because let are enabling youth to have the autonomy to determine the games winning conditions.</td>
<td>Youth independently redesigned a street</td>
<td>Youth players are able to add to gameplay based on their independent learning. This is done during the team ‘share back’ where they articulate their ideas amongst their fellow teammates.</td>
<td>In teams players are to transform the street in response to the scenario cards. Facilitators to enforce rules but instead, support teams as requested. Facilitators are instructed to give enough space for autonomous play. Instead they are tasked to remind teams to the best strategy to win is to collaborate.</td>
<td>Youth themselves articulated the designs and evaluate their peers. If necessary, facilitator could help teams summaries their ideas.</td>
<td>NA</td>
</tr>
<tr>
<td>How did adults recognize youth capabilities?</td>
<td>Youth are addressed as with respect of equals, co-learners.</td>
<td>Youth are addressed as with respect of equals, co-learners.</td>
<td>Youth are addressed as with respect of equals, co-learners.</td>
<td>Youth are addressed as with respect of equals, co-learners. Encouraged active play by with supportive commentary.</td>
<td>Youth are addressed as with respect of equals, co-learners. Youth efforts are verbally recognized by adult facilitators.</td>
<td></td>
</tr>
</tbody>
</table>
Table 9: Evaluation of Youth Engagement Effectiveness (Lesson 2: Build Capacity)

<table>
<thead>
<tr>
<th>PROCEDURAL QUESTIONS: Build Capacity</th>
<th>INTRO &amp; BRAINSTORM</th>
<th>MINI STREET DESIGN</th>
<th>SHARE BACK</th>
<th>GREEN STREET TEAM TRANSFORMATION!</th>
<th>PRESENTATIONS &amp; VOTE!</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How was youth knowledge augmented?</td>
<td>Practice using local &amp; experiential knowledge by citing examples of their neighborhood and other experiences and areas they were familiar with. Youth also generate the group themes.</td>
<td>Introduction to active transportation, road typologies, and GSG gameplay.</td>
<td>Practicing public speaking and communication through design.</td>
<td>Youth collaborative gaming facilitated internal knowledge sharing.</td>
<td>Youth shared their map-ideas.</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth skills augmented?</td>
<td>“</td>
<td>“</td>
<td>“</td>
<td>Autonomy of a real engagement process. Collaborative gaming requires strong communication and other group-based skills.</td>
<td>Practice collective decision-making. Practicing Public speaking.</td>
<td>NA</td>
</tr>
<tr>
<td>How was youth confidence augmented?</td>
<td>Addressing youth as co-inquirers and providing the autonomy to determine the conditions of ‘play.’</td>
<td>Experiential learning or ‘learning by doing’ - first recognizing current knowledge by creating game interfaces like the boards and expressive tactile opportunities, like drawing and the design cards.</td>
<td>“</td>
<td>Autonomy of a real engagement process.</td>
<td>“ Youth efforts are verbally recognized by adult facilitators</td>
<td></td>
</tr>
</tbody>
</table>
Table 10: Evaluation of Youth Engagement Effectiveness (Lesson 3: Encouraging Youthful Styles)

<table>
<thead>
<tr>
<th>PROCEDURAL QUESTIONS: Encouraging Youthful Styles</th>
<th>INTRO &amp; BRAINSTORM</th>
<th>MINI STREET DESIGN</th>
<th>SHARE BACK</th>
<th>GREEN STREET TEAM TRANSFORMATION!</th>
<th>PRESENTATIONS &amp; VOTE!</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How were youth socially engaged?</td>
<td>The GSG implements game thinking (a hook) to jumps into a spontaneous and creative brainstorm.</td>
<td>NA</td>
<td>Visual, oral and tactile means of communication.</td>
<td>Game thinking: focused enthusiasm via playful competition. Tactile, colorful activity</td>
<td>The vote and 'win'</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth dynamically engaged?</td>
<td>Tactile learning opportunities</td>
<td>&quot;</td>
<td>&quot;</td>
<td>Game thinking: focused enthusiasm via playful competition. Surprise scenarios. Tactile, colorful activity</td>
<td>&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth interactively engaged?</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>Game thinking: focused enthusiasm via playful competition. Tactile, colorful activity</td>
<td>&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth expressively engaged?</td>
<td>&quot;</td>
<td>&quot;</td>
<td>Visual, oral and tactile means of communication. Communication of personal learning and knowledge</td>
<td>Game thinking: focused enthusiasm via playful competition. Tactile, colorful activity.</td>
<td>&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth constructively engaged?</td>
<td>Youth are challenged to reflect on their values and needs.</td>
<td>&quot;</td>
<td>Communication of personal learning and knowledge.</td>
<td>Game thinking: focused enthusiasm via playful competition. Tactile, colorful activity.</td>
<td>&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>How were youth challenged to learn?</td>
<td>NA</td>
<td>&quot;</td>
<td>Communication of personal learning and knowledge. Visual, oral and tactile means of communication.</td>
<td>Game thinking: focused enthusiasm via playful competition. Surprise scenarios. Tactile, colorful activity</td>
<td>&quot;</td>
<td>NA</td>
</tr>
</tbody>
</table>
### Table 11: Evaluation of Youth Engagement Effectiveness (Lesson 4: Involving Adults)

<table>
<thead>
<tr>
<th>PROCEDURAL QUESTIONS: Involving Adults</th>
<th>INTRO &amp; BRAINSTORM DESIGN</th>
<th>MINI STREET DESIGN</th>
<th>SHARE BACK TEAM</th>
<th>GREEN STREET TRANSFORMATION!</th>
<th>PRESENTATIONS &amp; VOTE!</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How were adults involved?</td>
<td>Facilitators guide the brainstorm. Adults support and validate youth local &amp; experiential knowledge</td>
<td>Adults provide instructional support. Adults share transportation knowledge</td>
<td>Adults provide instructional support</td>
<td>Adults scale-back direct involvement, but are present as resource persons work</td>
<td>Adults encourage and help youth summarize their work</td>
<td>Youth efforts recognized by adult facilitators Post-game adults are exclusively involved in the following: the analysis of data, writing of the report, and presentation to decision-makers.</td>
</tr>
</tbody>
</table>
Table 12: Evaluation of Youth Engagement Effectiveness *(Lesson 5: Adapting the Sociopolitical Context)*

<table>
<thead>
<tr>
<th>PROCEDURAL QUESTIONS: Adapting the Sociopolitical Context</th>
<th>PRE-ENGAGEMENT</th>
<th>INTRA-ENGAGEMENT</th>
<th>POST-ENGAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the sociopolitical context adapt?</td>
<td>The sociopolitical context was partially adapted.</td>
<td>The sociopolitical context was partially adapted.</td>
<td>NA</td>
</tr>
<tr>
<td>If so, how?</td>
<td>Funding for a youth engagement strategy was made available. The City actively sought out youth by engaging with local schools.</td>
<td>The GSG is participant driven process and thus youth voices were authentic.</td>
<td>NA</td>
</tr>
<tr>
<td>If not, what were weaknesses?</td>
<td>The GSG did not make space for youth during the pre-engagement phase (i.e. prior to the gameplay). Youth were not involved in the engagement design process.</td>
<td>The process should of made decision-makers accessible to youth (i.e. invite a councilor to play the game or be presented to). A lack of sustained youth engagement.</td>
<td>Youth were not a part of the final decision-making process. Youth did not get a chance to present their findings to council or city staff. There was no follow-up with youth participants or young people in general.</td>
</tr>
<tr>
<td>If not, what were the barriers?</td>
<td>No access to local youth pre-engagement. Extreme politicization of the PGCC planning project marginalized youth voices.</td>
<td>Youth access to decision-makers. Extreme politicization of the PGCC marginalized youth voices.</td>
<td>Access to youth post-game Council meetings are adult oriented and logistically quite challenging for youth to independently attend. The extreme politicization of the PGCC marginalized youth voices.</td>
</tr>
</tbody>
</table>
The GSG did an adequate job at addressing most of Frank’s Five Lessons for Youth Participation. Table 7 summaries the GSG adherence to Frank’s lessons during the PFCC corridor project. The percentages and colour indicate the proportion of procedural questions per lesson adhered to across the various sub-mechanism or phases of the gameplay. Demonstrated by the Table 12 is a strong adherences to Frank’s lessons except for ‘adapting the sociopolitical context. The GSG successful incorporated game mechanics to encourage youthful styles of engagement. The process included appropriate degrees of adult involvement throughout the process as co-inquirers, facilitators and in other capacities. The gameplay is participant-driven, therefore player shared the responsibility and ownership of the outcome. Youth voices were given space by the responsibility (i.e. the brainstorm & vote). Commutatively the aforementioned ‘lessons’ built youth capacity to dialogue and collaboratively address active transportation challenges.

Overall the GSG did not adequately adapt the sociopolitical context was poorly adapted to youth needs. While there was a fair sharing of responsibility, the summary did not give space for youth voices. The GSG gameplay is participant driven, but a lack of sustained youth engagement prior to and after the engagement events diluted youth voices. Unfortunately the GSG was not successful at fully adapting the sociopolitical context to the needs of the local youth. The extreme media and public interest marginalized youth voices and no space was made available for the youth themselves. For instance space for youth to directly address council. At the same time, youth voices were heard by staff through the report and applied in the design of the proposal that went to council.
**Focus Group Results**

Based on the responses given to the semi-structured focus group questions, the two CoV planners identified strengths, opportunities, weaknesses and threats of using the GSG as an engagement tool for CoV that provides actionable, useful and impactful, information (Table 13).

Overall the GSG provided actionable information for CoV staff; the information was useful and impacted the final design of the PGCC planning project. That being said, ‘Threats’ and ‘Weaknesses,’ did diminish the actionability of the youth engagement imitative. The GSG did not consider or compensate for the general public or media overshadowing youth voices. A lack follow-up with participants or a sustained engagement was a weakness of the GSG and also hindered youth voices from reaching council. The Strength of the GSG included providing CoV staff with ‘Eye Opening’ feedback in a “thetically clear” and comprehensive manner. The GSG reports influenced staff and in turn affect the final design of the PGCC planning project. Moreover, youth voices through the GSG report are continuing to influences the study area. The report is informing additional neighborhood greening and social space.
Memorable Focus Group Quotes:

**Strengths:** “it was really eye opening for senior staff”

**Threats:** “[youth voices and the GSG Report] got overshadowed. The fact that it was in [final report to council], the appendices, councilor normally do work so hard and go through every single thing of a staff report, because of all the media fracas.”

**Opportunity:** “there was a lot more creativity and demands for public art, and the gardens, I think they are now in the phase [planners] working on the community gardens, and by making the traffic circles. And the [youths] work is informing those latter stages.”
### Table 13 Focus Group SWOT Analysis

<table>
<thead>
<tr>
<th>Helpful to Meeting the Objectives</th>
<th>Harmful to Meeting the Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td><strong>Weaknesses</strong></td>
</tr>
<tr>
<td>1. Staff used the findings to advocate for youth</td>
<td>1. Lack of follow up;</td>
</tr>
<tr>
<td>a. “Really eye opening” even for or senior staff.</td>
<td>a. evaluation with youth participants;</td>
</tr>
<tr>
<td>2. Methodologically it was strong.</td>
<td>b. and lack of follow up informing youth.</td>
</tr>
<tr>
<td>a. The sample was representative of the community-</td>
<td>2. The report methodology could have been “a little</td>
</tr>
<tr>
<td>b. Controlled for participant self selection bias</td>
<td>bit more robust and rigor”</td>
</tr>
<tr>
<td>c. Large Sample</td>
<td>3. The GSG and the report did little to address:</td>
</tr>
<tr>
<td>3. Thematically clear.</td>
<td>a. technical and cost considerations.</td>
</tr>
<tr>
<td>a. Extensive appendices-graphs</td>
<td></td>
</tr>
<tr>
<td>4. Unique youth preferences shone through.</td>
<td></td>
</tr>
<tr>
<td>a. City staff is implementing them.</td>
<td></td>
</tr>
<tr>
<td>b. The report is continuing “informing those latter stages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Involve youth in the post game stages;</td>
<td>1. The youth engagement strategy was “overshadowed” by the “media fracas”</td>
</tr>
<tr>
<td>a. interpretation of the findings;</td>
<td>2. The school strike has also hampered post-intervention</td>
</tr>
<tr>
<td>b. evaluation of the engagement and;</td>
<td>evaluation.</td>
</tr>
<tr>
<td>c. presentation of findings</td>
<td></td>
</tr>
<tr>
<td>2. Only one youth spoke at council and “she was incredible”</td>
<td></td>
</tr>
<tr>
<td>3. The GSG report is continuing inform neighborhood the latter</td>
<td></td>
</tr>
<tr>
<td>stage of the PGCC (i.e. demands for public</td>
<td></td>
</tr>
<tr>
<td>art, greening and social space).</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

Summary:

The analytical models indicated that the GSG performed positively but inconsistently at addressing the PGCC project’s youth engagement goals. For example, a Frank’s framework and the focus group indicated that sociopolitical contest was not adapted and that lack of follow up and early youth engagement hindered youth empowerment. As one planner put it: the report “got overshadowed” by the current adults-oriented sociopolitical context. At the moment, the hegemonic sociopolitical context favours adults and thus ill-equipped institutions need to make a concerted effort to modify practices to serve the needs of youth. For instance the CoV could enhance youth inclusion into civic governance by shortening “their bureaucratic procedures” (Frank, 2006). For youth, an “excessively long wait may prevent [them] from recognizing their role” (Alparone and Rissotto 2001). Alparone and Risotto suggest cynicism can be forestalled and trust can maintained, if a city provides periodic follow-ups. Council could occasionally have a ‘roaming council’ and situate decision-making processes in youth locations (i.e. schools, community centers). At the same time, some youth focused institutions like schools may become “uncomfortable with the sociopolitical controversies” (Frank 2006: Baldassari, et al 1987) and that adapting the sociopolitical contest should occur independent such institutions.

The focus group revealed that the media and general public marginalize youth voices at council. The GSG youth process influenced the PGCC Planning Project’s final report and design, but council meetings were
dominated by non-youth voices. At the end of the day, councilors’ decision-making was not informed by the youth report. At no point did the GSG enable youth to access councilors, the elected decision-makers. Frank argues that youth process ought to be provided opportunities to directly access council. For instance, presenting to council, or inviting councilors to the schools as participants. Had they done this, local youth could have served as their own advocates while accruing invaluable learning experiences. The experience could have provided personal growth and development by boosting self-esteem and exposure new opportunities.

Figure 11a: PGCC Youth Preferences by Overall Themes
At the same time, the evaluative frameworks’ indicate the gameplay and report successfully addressed the CoV youth engagement goals. This face-to-face process is an effective mechanism for youth to enthusiastically come together, identify needs, and collaboratively address challenges. Players and facilitators equitably share responsibility; throughout the process youth had opportunities to autonomous decision-making. For instance, the ‘GSG Team
Transformation’ shared power by enabling autonomous collaboration in response to the scenario cards. Moreover the process explicitly built youth capacities with respect to dialogue and design. The ‘Mini-Street Design’ & ‘Share Back’ phases focus on learning about the street typologies and communicating ideas using the GSG design process. Adult involvement was persistent and appropriate throughout the gameplay and overall process. Facilitators were instructed to engage with youth, and that their role was supportive and not authoritative. Moreover adults were involved and by advocating for resources to be allocated for youth engagement did partially adapt the sociopolitical context. Post-engagement the focus group indicated that adults advocated for local youth using the GSG report.

Despite not being reviewed by council, the GSG youth report still influenced the final design of the PGCC project. CoV staff indicated that the report was “well laid out, so were the appendices, and with the key themes [they] could wrap it in many things” (focus group). Figures 11a to Figure 11c is good example of how the GSG report provides youth feedback in broad themes and relevant detail technical information. The report also describes design preferences for over 6 distinct street typologies (i.e. bike routes, commercial street, park and school on a neighborhood street, residential and school on a neighborhood street, and etc.). Figure 12 & 13 illustrate the relevant and structured manner information was aggregated for CoV urban designers. The report not only provides useful thematic and detailed urban design elements, it captures unique and creative design features (see Figure 14). In fact the GSG process and report are so comprehensive they “continue to inform” the design of neighborhood traffic calming, community art, and greening initiatives (focus group).
Gamification encouraged youthful styles throughout the board game. For instance, the colorful aesthetic and tactile gameplay provided a venue for engaging players and introducing diverse approaches to learning. Other lessons like sharing responsibility, building capacity, and adult involvement were also achieved by incorporating a pedagogical framework where youth were not considered passive objects, but subjects that collaborate, inquire, and create new knowledge. According to Freire’s (1970) Education Empowerment theories, this kind of learning environment can build self-esteem and even lead to social change in youth Freire’s theory is embodied in the design of the GSG’s gameplay, where young players share power, lead each other in efforts to map neighbourhood assets, identify problems on their own, and are encouraged by facilitators to collaboratively imagine solutions.

Figure 12: Top Ranked Design Features for Bike Routes

<table>
<thead>
<tr>
<th>TOP RANKED DESIGN FEATURES FOR BIKE ROUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREENING 29%</td>
</tr>
<tr>
<td>Flowers 35%</td>
</tr>
<tr>
<td>Trees 23%</td>
</tr>
<tr>
<td>Garbage Cans 16%</td>
</tr>
<tr>
<td>INTERSECTION IMPROVEMENTS 18%</td>
</tr>
<tr>
<td>Painted Crossings 38%</td>
</tr>
<tr>
<td>Pedestrian-controlled crosswalks 26%</td>
</tr>
<tr>
<td>Accessibility Ramps 13%</td>
</tr>
<tr>
<td>PERMITTING 11%</td>
</tr>
<tr>
<td>Rezoning 46%</td>
</tr>
<tr>
<td>Mobile Food 18%</td>
</tr>
<tr>
<td>Temporary Commerce 14%</td>
</tr>
</tbody>
</table>

Figure 13: Streetscape Thematic Comparison: Bike Route
Limitations and Lessons Learned:

The following limitations are based on the analytical frameworks and the focus groups. Rowe and Frewer’s (2005) typology indicated that the GSG was an effective mechanism because its IFM variables were congruent with the goals of the youth engagement strategy. That being said, the evaluative framework is unable to go deeper than indicating the “presence” of a variable. For example, the GSG’s structured aggregation of information was not subject to any qualitative criteria. The goal was to provide actionable information: data that is easily absorbed by, and useful for, decision-makers. However, the effectiveness of the structure or method of aggregation was not considered. Subsequently the determination that the mechanism was capable of being ‘effective’ requires further evaluation.

The GSG game also did not address enough of the technical and financial realities of city planning within the gameplay. In the focus group, city staff indicated that if the gameplay had integrated additional design constraints that current planners face, the data yielded would have greater potential to inform the final design.

For example, integrating the monetary costs of urban design features with some sort of purchasing aspect to the game (e.g. introducing money) or
adding technical constraints like the requirement for a continuous 6-meter right of way for emergency vehicles. These sorts of constraints have previously been incorporated in other examples of engagement games. For example, designers of the Dutch game ‘Play the City’ incorporated the costs of infrastructure by using game mechanics like a community budget and requiring players to negotiate with other players for additional funds or in-kind contributions when deciding whether to purchase infrastructure such as sidewalks, higher densities, street furniture, or even allocating space for a community garden. Added complexity does enhance usability but also take addition time. For instance, ‘Play the City’ games require participants to commit to daylong or multiday engagement processes.

While a lack of financial constraints inhibited the usability of the GSG mechanism, the process did integrate some constraints planners face. For instance, the board employed a grid, which prompted players to design within a constrained space (Figure 5). While this process was intended to build youth capacity for decision-making and for youth to gain an appreciation of urban planning, the fact that financial and technical considerations were not realistic may have hindered the usefulness, or actionability, of the game to future policymaking.

Perhaps more importantly, the lack of ‘realistic’ constraints also did not constrain players’ imagination. It may have led players to dream up innovative ideas that cannot be incubated within conventional thinking. In other cases, it inspired team building and confidence for the players who imagined creative new solutions to old problems. For instance, one student wanted to maximize direct sunlight to the sidewalks, but also did not want to get wet when it rained. He came up with the idea of lining commercial streets with
‘rain-recycling-solar retractable awnings’ that responded to actual weather conditions. While his idea was almost certainly not common practice or feasible for the City, his idea was greatly appreciated by his teammates, and their team earned the most votes from all the other players.

The nature of collaborative gaming precludes residents that are time-scarce from participating. Face-to-face deliberation forums require citizens to commit a considerable amount of time and effort (Min, 2007); this research suggests that online deliberation can be a good alternative to costly face-to-face deliberation. However, face-to-face engagement has been empirically demonstrated to foster a greater capacity for deliberation and thus democracy (Min, 2007). Moreover, Vancouverites are increasingly feeling concerned about “a growing sense of isolation and disconnection” and worry that this disconnect from human contact is “deepening civic malaise” (Vancouver Foundation, 2012). Therefore the higher cost of face-to-face engagement has the potential for greater qualitative returns. Face-to-face engagement strategies like the GSG do not preclude supplemental online strategies. For example, the results from the GSG gameplay could be made available for online deliberation or polling if the City chose.
Conclusion

The future of youth engagement requires practitioners and decision-makers to acknowledge that many sociopolitical contexts are not designed to accommodate youth; thus for any engagement process to go beyond tokenism accommodations at must be made (Frank 2006). Early and sustained youth involvement in engagement process is also fundamental. Games can play an increasingly meaningful role in engaging youth and adapting the socio-political context to represent their needs and to encourage their voices. The GSG may be a valuable tool to apply to future planning projects where empowering youth voices is critical.
### Appendix A

**Table 14 Key Engagement Mechanisms Adapted from Rowe and Frewer (2005)**

<table>
<thead>
<tr>
<th>Mechanism Class</th>
<th>Examples</th>
<th>Selection Method: Controlled/Uncontrolled</th>
<th>Elicitation: Facilitation: Yes/No</th>
<th>Response Mode: Open-Closed</th>
<th>Information Input: Set/Flexible</th>
<th>Medium of Information Transfer: FTF/Non-FTF</th>
<th>Facilitation of Aggregation: Structured/Unstructured</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication Type 1</strong></td>
<td>Information broadcasts</td>
<td>Uncontrolled</td>
<td>NA</td>
<td>NA</td>
<td>Set</td>
<td>Non-FTF</td>
<td>NA</td>
<td>These are traditional communication mechanisms, typically used as part of public information programs, through which a particular population is targeted with set information, via a variety of (non-FTF) media.</td>
</tr>
<tr>
<td><strong>Communication Type 2</strong></td>
<td>Public hearings Public meetings (with questions and answers)</td>
<td>Uncontrolled</td>
<td>NA</td>
<td>NA</td>
<td>Flexible</td>
<td>FTF</td>
<td>NA</td>
<td>These mechanisms rely on the public to come to the information rather than vice versa. As such, the involved public is largely self-selected and biased in terms of those most proactive and interested. Information is communicated face-to-face by sponsors to those involved and is variable, depending to some degree (often small) on what participants ask. Public hearings are often required when some major government program is about to be implemented or prior to the passage of legislation; public meetings may be initiated by a local authority or convened in response to citizen concerns.</td>
</tr>
<tr>
<td><strong>Communication Type 3</strong></td>
<td>Drop-in centers, Cable TV (not interactive), Internet information</td>
<td>Uncontrolled</td>
<td>NA</td>
<td>NA</td>
<td>Set</td>
<td>Non-FTF</td>
<td>NA</td>
<td>These mechanisms rely on the public to come to the information. Drop-in centers (frequent in most UK authorities) involve staffed information distribution points at which citizens can stop to ask questions, review literature, or look at displays or exhibitions concerning a project in the area. More modern methods supply information via the Internet (e.g., council plans on a Web site) or cable TV (e.g., the Parliamentary Channel in Britain). The information is set in that the public can only acquire what sponsors make available, although it is variable in depending on what is sought and when. Although there may be FTF contact with drop-in center staff, these tend to be representatives of decision makers directing the public to appropriate information rather than significant information sources in themselves.</td>
</tr>
<tr>
<td><strong>Communication Type 4</strong></td>
<td>Hotline</td>
<td>Controlled</td>
<td>NA</td>
<td>NA</td>
<td>Flexible</td>
<td>Non-FTF</td>
<td>NA</td>
<td>As with type 3 mechanisms, these rely on public initiative. Information is flexible, however, and supplied in response to individual query. Information is not provided FTF but via some other medium, such as the phone. A hot-line allows citizens to phone in questions on a particular project and receive either a direct answer or an answer by return call.</td>
</tr>
<tr>
<td>Mechanism Class</td>
<td>Examples</td>
<td>Selection Method: Controlled/Uncontrolled</td>
<td>Elicitation: Facilitation: Yes/No</td>
<td>Response Mode: Open-Closed</td>
<td>Information Input: Set/Flexible</td>
<td>Medium of Information Transfer: FTF/Non-FTF</td>
<td>Facilitation of Aggregation: Structured/Unstructured</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
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</tr>
<tr>
<td>Consultation Type 1</td>
<td>Opinion poll, Referendum, Survey, Telepolling/votin g</td>
<td>Controlled</td>
<td>No</td>
<td>Closed</td>
<td>NA</td>
<td>Non-FTF</td>
<td>Structured</td>
<td>These mechanisms are essentially highly controlled ways of acquiring answers to specific questions from large samples. Quantity of data is more important than quality (there is no facilitation of the elicitation process, responses are closed/limited, and there is no FTF interaction). Notable sources of within-mechanism variance include whether there is direct impact of elicited responses (yes for referenda; no for surveys, opinion polls, and advisory referenda, or “preferenda”) and the precise medium of transmission (i.e., whether postal or over the phone; e.g., telepolling/voting).</td>
</tr>
<tr>
<td>Consultation Type 2</td>
<td>Consultation document</td>
<td>Controlled</td>
<td>No</td>
<td>Open</td>
<td>NA</td>
<td>Non-FTF</td>
<td>Unstructured</td>
<td>This class aims to attain open responses on a significant issue. The typical mechanism is the consultation—in which a document is sent to a list of potentially interested people (often, representatives of interest groups and other organizations) with limited time available for open commentary. Potentially, nonelected others may contribute but may find it difficult to do so if they are outside of the information loop. See type 3 for consultations that deliberately aim for wider input.</td>
</tr>
<tr>
<td>Consultation Type 3</td>
<td>Electronic consultation (interactive Web site)</td>
<td>Uncontrolled</td>
<td>No</td>
<td>Open</td>
<td>NA</td>
<td>Non-FTF</td>
<td>Unstructured</td>
<td>As type 2, but with uncontrolled selection. Some local authorities in the UK have intranet sites inviting e-mail messages from citizens on particular local issues or service matters.</td>
</tr>
<tr>
<td>Consultation Type 4</td>
<td>Focus group</td>
<td>Controlled</td>
<td>Yes</td>
<td>Open</td>
<td>NA</td>
<td>FTF</td>
<td>Unstructured</td>
<td>This type of consultation emphasizes quality of information over quantity, with effort expended to facilitate the information elicited with FTF interaction. It is typified by the focus group, which may involve as many as a dozen people facilitated in discussion of a general issue. Because there is no significant sponsor information, this may be seen as a consultation rather than participation mechanism.</td>
</tr>
<tr>
<td>Consultation Type 5</td>
<td>Study circle, Open space</td>
<td>Uncontrolled</td>
<td>Yes</td>
<td>Open</td>
<td>NA</td>
<td>FTF</td>
<td>Unstructured</td>
<td>This type is similar to type 4 except that participant selection is uncontrolled (participants self-selected). It is typified by the study circle (frequent in Sweden and the US). In this, a group of 5-20 people meets to discuss an issue or study a series of books: they come together for at least three sessions with a volunteer facilitator/group discussion leader. Guidelines are laid down for the conduct of the discussion. Open space involves large assemblies of self-selected participants who identify issues, which are discussed in smaller workshops before participants come together for a final plenary session.</td>
</tr>
<tr>
<td>Mechanism Class</td>
<td>Examples</td>
<td>Selection Method: Controlled/Uncontrolled</td>
<td>Elicitation Facilitation: Yes/No</td>
<td>Response Mode: Open-Closed</td>
<td>Information Input: Self/Flexible</td>
<td>Medium of Transfer: FTF/Non-FTF</td>
<td>Facilitation of Aggregation: Structured/Unstructured</td>
<td>Description</td>
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<tr>
<td>Consultation type 6</td>
<td>Citizen panel—group based (e.g., health panel)</td>
<td>Controlled</td>
<td>Yes</td>
<td>Open</td>
<td>NA</td>
<td>FTF</td>
<td>Structured</td>
<td>The main example of this type is the standing citizen panels (e.g., health panel). This is characterized by the choice of representative participants who meet in a facilitated group setting. Unlike the focus group, the panel may meet several times a year to debate different topics (i.e., views may be traced throughout time), with members rotated off after a while. At the end of meetings, opinions are usually aggregated via some form of vote/secret ballot. Consultations may also take place via mail (i.e., non-FTF, a different mechanism class).</td>
</tr>
<tr>
<td>Participation type 1</td>
<td>Action planning workshop, Citizens' jury, Consensus conference</td>
<td>Controlled</td>
<td>Yes</td>
<td>Open</td>
<td>Flexible</td>
<td>FTF</td>
<td>Unstructured</td>
<td>The mechanisms of this type are characterized by the controlled selection of participants, facilitated group (FTF) discussions, unconstrained participant responses, and flexible information input from the sponsors, often in the form of &quot;experts&quot; who are available for questioning by the public participants throughout a number of days. The group output is not structured as such and may depend on social and psychological group factors (dogmatic individuals, and so on).</td>
</tr>
<tr>
<td>Participation type 2</td>
<td>Negotiated rule making, Task force</td>
<td>Uncontrolled</td>
<td>No</td>
<td>Open</td>
<td>Flexible</td>
<td>FTF</td>
<td>Unstructured</td>
<td>This class of mechanisms is structurally similar to type 1 but with the difference that there is no facilitation of the information elicitation process. In many ways, they are simple group processes with no specific facilitation—of input from group members, or aggregation of opinions. The examples noted here use small groups of participants (public representatives), with ready access to all pertinent information, to solve specific problems.</td>
</tr>
<tr>
<td>Participation type 3</td>
<td>Deliberative opinion poll, Planning cell</td>
<td>Controlled</td>
<td>Yes</td>
<td>Open</td>
<td>Flexible</td>
<td>FTF</td>
<td>Structured</td>
<td>This class is also similar to type 1 but with the essential difference that structured aggregation takes place. In the case of deliberative opinion polling, the selected participants are polled twice, before and after deliberation on the issue (and questioning of experts); and in this process, structured aggregation of all participant opinions is attained. In the case of planning cells (a German mechanism), these tend to use various decision aids to ensure structured consideration and assessment, and hence aggregation, of opinions.</td>
</tr>
<tr>
<td>Participation type 4</td>
<td>Town meeting (New England model)—with voting</td>
<td>Uncontrolled</td>
<td>No</td>
<td>Open</td>
<td>Flexible</td>
<td>FTF</td>
<td>Structured</td>
<td>This mechanism class differs from the others on a number of dimensions. Importantly, selection is uncontrolled, and there is no facilitation of information elicitation, although aggregation is structured. The archetypal exam is the town meeting (New England model), in which voting (aggregation) takes place after debate between self-selected participants’</td>
</tr>
</tbody>
</table>
Appendix C

Focus Group questions

1. What are some of your concerns regarding youth engagement? (i.e. barriers)
2. What are the benefits of engaging youth?
3. How did the GSG address your concerns regarding the youth engagement?
4. Did the GSG provide the planning department with actionable feedback? If so
5. How did the tools alter or add to the Point Grey-Cornwall Project’s policies? Design?
6. What other opportunities do you imagine using the GSG process?
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Appendix E: GSG Facilitator Handbook
Facilitator’s Handbook:
A guide to playing and facilitating a street-to-green transformational board game!
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How to use this handbook

This guide was developed for the following three reasons: (1) to help facilitators conduct the Green Street Game (GSG); (2) to archive the GSG’s implementation during the City of Vancouver (CoV) Point Grey-Cornwall Active Transportation Corridors Project’s (PGCATC) Youth Engagement Strategy (YES); (3) as part of Adam Kebede’s Masters of Urban Planning professional project.

The GSG process requires significant or active facilitation to be run within the recommended times of 45 or 75 minutes. Fortunately, the process can be effectively facilitated with minimal experience with the help of this document. In support of facilitators and the documentation of the GSG process this guide contains the GSG rationale and detailed instructions including examples of the gameplay and all other supporting materials (cards, game boards, etc.).
Play the Green Streets Game!

Time Required:
- High School: 70 mins,
- Elementary School: 45 minutes

The workshops vary in length because the gameplay for older youth includes greater autonomy, and complicity and depth of play (i.e. more scenarios)

Foundational Objectives:
- Players are to discuss their existing transportation behaviours and the goals they have for active transportation within their neighbourhood.
- Players work in teams to collaboratively redesign the street to accommodate their active transportation needs.
- Every player votes as an individual and at the end of the game the team with the most votes is the winner

Learning Outcomes:
- Practice Diverse Ways of Knowing: Practice using local knowledge; practice engaging in kinaesthetic and experiential learning; and practice developing social Intelligence (cognitive, emotional, and compassionate empathy).
- Team-Based Problem Solving: Consensus-based decision-making, and team-based problem solving.
- Topics: Active transportation, PGCCATC (a City of Vancouver public process), Livability
- Experience: Participation in a civic process

Games Can Be Effective Community Engagement Tools

The careful application of game mechanics can incentivize cooperative strategies and mitigate uncompromising or exclusionary player behaviour. Subsequently, a carefully designed process will yield rich representative feedback as the ideas put forth will be collaboratively deliberated and negotiated.

---

1 The duration of the game is based on the players’ autonomy, depth and competency, as well as available class time. The high school version requires more time because players are given more autonomy. Older youths are also asked to address more scenarios and their cumulative challenges. The Vancouver School Board periods are also longer for older youth, with 75min periods for secondary students and 45-60min periods for elementary students.
**Description:**

The Green Streets Game (GSG) is a comprehensive collaborative design process that facilitates playful street transformation. The engagement tool’s length and instruction are adapted to serve both elementary (45 minutes) and high school students (70 minutes). The GSG is team-based game where players will be in competition with each other but incentivized to collaborate and achieve consensus amongst their teammates. Players are to produce street designs based on the ideas and aspirations generated from an initial brainstorm. Every player has one vote and at the end of process the team with the most votes wins. Players cast their votes based on two factors; (1) ideas and aspirations generated in the group brainstorm; (2) and their individual preferences. Accordingly, players need to work cooperatively and collaborate on the design- if you can’t get the person beside you to go along with the your design, how are you going to get others to vote for the design?

**‘Fun, Safe & Easy’**

The City of Vancouver wants feedback on local youths’ concerns regarding *inclines/slope, traffic, ‘greening,’ programming and route selection*. These terms are jargon, and both youth and adults have trouble engaging with them. To address this issue and encourage engagement, the GSG introduces the simple rubric of *Fun, Safe & Easy*.

Using more accessible terminology allows participants to better understand and contribute based on their local knowledge and preferences.

*Fun* is the idea that place or design could spark enjoyment.
GSG is not a traditional board game as the process requires facilitation from a lead facilitator and several team facilitators. That being said, like board games, a common playing surfaces and role-playing/simulations are employed. Drawing inspiration from Friere’s Education Empower Model (EMM), facilitators are to engage with players as co-learners. This non-hierarchical dynamic divides responsibility and authority equally amongst all participants. Inspired by popular education models, the GSG embraces the following three sequences:

1) Local youth have experienced the barriers and opportunities for active transportation in their neighbourhoods. Using their local knowledge of the built environment, players are to generate group themes by identifying strengths and aspirations for public space;

2) Next, facilitators introduce potential problems and provoke player discussion regarding the challenges and potential of the street;

3) Then, the game-play and player engagement culminates in the ‘Large Board’ and ‘vote’ activities where players will negotiate, reflect upon and navigate teammates’ and classmates’ personalities, priorities, and game constraints.
What: The GSG is a collaborative public space board game that was implemented as part of the Point Grey Cornwall Corridor project’s (PGCC) youth engagement strategy. The CoV sought youth feedback from local youths regarding their active transportation needs and aspirations of ‘Fun, Safe, & Easy’ design principles. The GSG is a public engagement mechanism that carefully applies game thinking to make active transportation design elements and concepts accessible and promote inclusive decision-making through a collaborative process.

The game is collaborative by design: all players share in the rewards and risks and a consensus-based approach is the best way to win the game. The game is participant-driven, with players brainstorming together to determine the winning scenario, working in teams to re-design neighbourhood streets, and then voting as individuals for their preferred design. Youth express their design preferences by redesigning “boards” or neighbourhood “maps” containing local street typologies (fig.2). A summary of the redesigned maps is then compiled and described in a report to decision-makers.

Why: There are ethical and pragmatic reasons for a governing body to seek public engagement. In Kitchen Table Sustainability,
Sarkissian (2003) provides two reasons for community engagement:

1) *It is ethical*: In democratic society, those whose livelihoods, environments, and lives are at stake should be consulted and involved in the decisions that affect them directly.

2) *It is pragmatic*: Support for programs and policies often depend on people’s willingness to assist the process. It is also often necessary because “if planners will not involve the citizens [they] will involve themselves”. ¹

**Games and Community:**

A game is a shared experience, and can therefore reinforce relationships and bridge gaps between players’ divergent lived-experiences (Skoumpourdi & Kalavassiss, 2007). With respect to inclusive decision-making, in collaborative games all players “are unified and share the rewards or penalties of their decisions” (Delgado 2014). This encourages strategies that demand collaborative decisions (Radner & Marschak, 1972; Zagal et al., 2006).
Public engagement has historically been heralded as a curative intervention to civic malaise. Yet there is a new recognition for more inclusive opportunities, variation and added vigour. An issue that many communities face, including the City of Vancouver, is that residents in cities can be overwhelmingly lonely and bothered by what they perceive to be resident withdrawal from community. In Vancouver, loneliness or social isolation correlates with negative social outcomes including poor physical and mental health, poverty and death (Vancouver’s Engaged City Task Force, Vancouver Foundation).

**Who:** Youth are particularly vulnerable in the urban environment. For instance, Canadian youth are becoming increasingly sedentary (Bruce and Katzmarzyk, 2002; Craig et al., 1999). Active transportation dramatically increases physical activity, which helps reduces obesity and the onset of type II diabetes among people under 18 (Appleyard, 2003; Anon, 1993; Cooper et al, 2003; Boarnet, 2005). If municipalities can adapt their public engagement process to meet the unique needs of youth, better health outcomes may be more achievable.

Youth engagement processes have traditionally been plagued both by society’s often dismissal of youth, and by applying inappropriate engagement strategies and mechanisms. The needs and preferences of young people are different than those of adults, and therefore we cannot assume the same treatment (Talen and Coffindaffer 1999; Terrible 2000). The needs and preferences of young people are

---

**Education Empowerment Model:**

In the first stage of the GSG, *Generating Group Themes*, participants are asked to speak to their personal experiences and identify the needs of their communities. The facilitator does not have authority over participants, but rather acts as a co-learner. During the second stage, *Proposing Problems*, facilitators encourage collaborative inquiry by exploring thought-provoking scenarios that generate questions from the participants. There are no simple solutions; this stage is instead intended to illustrate the multiple dimensions of the participants’ lives with “a sociocultural, political, historical, and economic perspective” (Rindner, 2004, p.80). In the final stage, *Act-Reflect-Act*, participants enter their community not as recipients of knowledge, but as informed agents with an increase awareness of their socio-economic reality and the ability to transform their surroundings.
different than adults, and we cannot assume the same treatment for both. Youth is a transitional life stage between childhood and adulthood. The use of age-based criteria or biological and psychological factors in defining youth is challenging, for it is widely inconsistent across the literature (Furstenberg, 2000; Galland, 2001; Gauthier, 2000). In the City of Vancouver, a person is considered a youth depending on the context and age based criteria. Age ranges for youth include 9-24, 13-24, or 15-24. Overall there are a multitude of factors that affect the transition in and out of the life stage of youth (Elder et al., 2005).

**How:** Incorporating **youth best practices** and **gamification**, the GSG is underpinned by Friere’s three-stage **Empowering Education Model (EEM)**;

(1) generate group themes  
(2) pose problems and  
(3) act-reflect-act.

EEM is a pedagogical framework where participants are not considered passive objects but subjects that collaborate, inquire, create new knowledge and “new understanding across divisions of power,” building self-esteem and social change (Freire 1970). Based on a review of three decades youth processes, **Franks’ Five**

**Gamification:**

Gamification is the “careful and considered application of game thinking to solving problems and encouraging learning using all the elements of games that are appropriate.” (Kapp 2012)

**Game Mechanics:**

Game mechanics are the components of a game including turns, cards, scenario, aesthetics, points, and leaderboards.
Lessons for Youth Participation establishes "a standard for good practice;"

1. Give youth responsibility and voice;
2. Build youth capacity;
3. Encourage youthful styles of working;
4. Involve adults throughout the process;
5. Adapt the sociopolitical context.

Gamification is an opportunity to solve problems and encourage capacity building in an inclusive manner (Thatcher, 1990). This is because games are an abstraction of reality whereby complex systems are easier to explore and risk unfamiliar solutions (Kapp, 2012; Hoffman, 2009). In games existing social dynamics persist, like strong-arming, bullying, teasing, snickering, racial & social biases (Cite). However, the status quo can be challenged by certain game mechanics, like roleplay, that and create new understandings and empathy (Cite). Accordingly, this medium is a treasure trove of tools for individual and community development (Barta & Schaelling, 1998).

A strong indicator of effective game design is enabling an immersive and effortless state of focused engagement known as ‘Flow’ (Mihaly Csikszentmihalyi 1991). A curve of interest illustrates this degree of focused engagement a player experiences throughout the gameplay (Kapp 2012). This is because a player cannot maintain focused play if a gameplay’s level of interest is not stable or increasing (Kapp 2012). Thus this descriptive model is helpful in mapping the careful application of game thinking through the gameplay and is available to facilitators on page (please refer to table m. p. b).
# Franks Five Lessons for Youth Participation & GSG

## Table 1 Frank’s Five Lessons for Youth Participation & GSG

<table>
<thead>
<tr>
<th>Lessons</th>
<th>Examples</th>
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<tbody>
<tr>
<td><strong>Give youth responsibility and voice.</strong> The inequity of power between youth participants and adults must be addressed, as “when adults relinquish some power and provide youth with greater autonomy their motivation to participate increases” (Frank 2006).</td>
<td><em>Players determine the design preferences in the Brainstorm and decide which design wins in the Vote!</em></td>
</tr>
<tr>
<td><strong>Build youth capacity.</strong> A public process is likely to be a new experience for youth that can reduce “the gap between the demands of planning processes and young people’s capabilities by building youth knowledge, skills, and confidence” (Frank: Baldassori et al. 1987; Lorenzo 1997: Checkoway et al. 2003).</td>
<td><em>Mini-Street Design phase builds upon players’ understanding of street design and introduces players to the GSG design tools.</em></td>
</tr>
<tr>
<td><strong>Encourage youthful styles of working.</strong> Eliciting youth participation on their terms is important, and effective techniques tend to facilitate dynamic, interactive, social, expressive, challenging, and constructive environments (Malone 1999; Alparone and Rissotto 2001; Corsi 2002; Horelli and Kaaja 2002).</td>
<td><em>The GSG implements game thinking to maintain players focus, first by jumping into a spontaneous brainstorm, and sustaining focus by facilitating a win-scenario and voting!</em></td>
</tr>
<tr>
<td><strong>Involve adults throughout the process.</strong> Adults play a vital role in youth engagement. Advocacy for youth voices, assistance in accessing resources, and building youth competences are all critical components of youth engagement that can be provided by adults. That being said, a balance is important, as youth will still need the freedom or space to grow and develop responsibility.</td>
<td><strong>Adults provide instructional support and can share technical knowledge.</strong></td>
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<td><strong>Adapt the socio-political context.</strong> The normative socio-political system is adult-centric and adaptation to a youth-friendly context is critical to effectively serve the needs of this demographic (Franks: Alparone and Rissotto 2001; Corsi 2002; Horelli and Kaaja 2002).</td>
<td><strong>Make decision-makers accessible to youth by inviting planners and councillors to facilitate or play and join a team.</strong></td>
</tr>
</tbody>
</table>
GSG Pre-Play Checklist (30 Players)

Resources/ Prep:

- Set up the classroom according to pre-game instructions
- Pre-game facilitator instructional huddle (10 minutes)
- 30 active transportation surveys per game
- Stopwatch
- Accessible chalk and chalkboard
- Collaborative Street Design Maps (6)
- GSG Team Packages per class (6)
  - Markers/Pencil Crayons,
  - (1) Deck of design cards,
  - (6) Mini-Street Design Booklet (Street Design 101, Overview of GSG game-play, Individual ‘Board’ or Map),
  - Scenario Cards-A.

Facilitators Required: Six facilitators are required for to run a game with 30 students.
Foundational Objectives: Facilitators and players are co-learners. The role of the facilitators is to provide instruction that will encourage player participation, ideas and collaboration.

- **Lead Facilitator (1):** Facilitates the introduction/brainstorm, and coordinates the final present back and vote. Additional responsibilities include time keeping and supporting the Team Facilitators.
- **Scribe (1):** During the introduction/brainstorm a team facilitator will act as scribe (i.e. write the ideas on the board).
- **Team Facilitators (5):** Each team of 4-6 players will have one team facilitator. A team facilitator is the immediate resources person for that team. They will facilitate the Mini Street Design, and Green Street Team Transformation.
Gameplay Summary (high school 75 minutes + prep)

OBJECTIVE: Players collaboratively redesign neighborhood streets to accommodate their active transportation needs.

PRE GAME HUDDLE
10 min

INTRO & BRAINSTORM
10 min

MINI STREET DESIGN
12 min

SHARE BACK
10 min

GREEN STREET TEAM TRANSFORMATION!
25 min

PRESENTATIONS & VOTE!
15 min

SUMMARY
3 min

Facilitate a class wide brain-storm. Prompt participation by asking players to share their "Fun, Safe, & Easy" active transportation ideas. Encourage players to draw upon their experiential knowledge (i.e. local knowledge).

This point forward until the 'vote' all activities will be facilitated in teams of 4-8 players. Use the "Mini-Street Design Workshop" to build your team's knowledge of street design & the GSG tools (maps, scenario cards & drawings). First discuss different street types, and then ask players to individually redesign a street.

Facilitate a 'share back' of 1 or 2 design solutions generated in "mini street design" (now = 45-60s each). This activity builds upon the last by practicing using the GSG design tools (i.e. maps & scenario cards) for peer-to-peer communication, a critical component of collaboration.

In teams players are to transform the street in response to the scenario cards:
- Support your team as needed, but give enough space for autonomous play. Remind your team that to win, they must attract the most votes and that collaboration is the best strategy.
- Every team is to present their 'map' to the class. 1-2 mins. Players will cast votes their votes based on brainstorm and their active transportation design preferences. Help your team summarize and present their ideas.

Acknowledge the participants valuable contributions by verbalizing the challenge they have overcome, summarizing their ideas, and explaining how their designs are to be used by the city.
Game Tools

**Design Cards:**
Slightly smaller than conventional playing cards, the design cards feature illustrated urban design elements. These cards include design element like benches, public art, community gardens, and farmers’ markets. The design cards are used during the design activities (*Mini Street Design* and *Group Street Design*). These cards encourage the players to communicate with each other, and can act as place makers to help spark player creativity! Players that are uncomfortable drawing can use the design cards to communicate their ideas.

**Scenario Cards:**
The scenario cards can be used in both design activities, but must be used in the *Group Street Design*. They provide players with active transportation challenges to solve. Scenarios can be thought-provoking and generate activity amongst players. Moreover, they provide risk-free opportunities to explore challenging realities and empathize with others’ experiences. Scenarios can also be used to prompt stalled play.

**Street Design 101:**
This is a quick learning tool that is designed to use experiential or local knowledge amongst its players. The tool features three street typologies and challenges participants to think about different types of streets and the sometimes-surprising ways that they serve different transportation needs. Players are asked to draw on knowledge of their neighbourhoods.
Individual ‘Board’ or Map:
This is a small map of a street and intersection for individuals to practice using the GSG tools and visualizing their ideas. Using this tool as an individual is important because people feel more comfortable attempting a process without the pressure of their peers. It is important not to overwhelm players and increase challenges incrementally.

The tool has features like a grid pattern and some traffic calming interventions (stop signs, cross walk). The grid pattern offers a spatial challenge to the players by asking them to operate within its constraints.

Group Street Design Map:
This map is where players’ ideas and concerns are debated, negotiated, and then illustrated. Subsequently, maps are the main source of feedback for the sponsor once they are collected, labelled, and analyzed. The map features representative proportions of local road typologies, with traffic calming and active transportation infrastructure present on each board. There are a total of four roads and two areas featured: a main street, a bike route, a right neighbourhood street (park and schoolyard adjacency), a left neighbourhood street (residential and school adjacency), a park, a school, and a schoolyard. A grid pattern is also used to provide spatial context.

Below: Group Street Design Map & Legend (right)
6 GSG Team Package:
To facilitate smooth transitions and storage of materials, compile them into what is necessary for one team to play through a process. Items include the following:
- Markers/pencil crayons
- Deck of design cards (1)
- Mini-Street Design Booklet (Street Design 101, Overview of GSG game-play, Individual ‘Board’ or Map) (6)
- Scenario Cards A
Pre-Game Class Room Set-Up:

**Description:** The workshop requires a particular classroom set-up. Players will participate in various manners as individuals, in teams of 4-6, and as a classroom. The following instructions will ensure a game ready classroom/space:

- Arrange desks in pods of 4-6 students, desks facing inward. There should be enough space in the center for all members of the group to draw with ease on one large map (1.4m by 1.4m).

- All participants need to able to see a central chalkboard or alternative large writing surface.
All Pre-Game Facilitator Instructional Huddle

Description

Ten minutes prior to the GSG, the lead facilitator is to gather the team facilitators in a huddle and review the gameplay (instructions), provide materials, adapt to the classroom configuration and address any unforeseen concerns.

Note: Prior to the game day facilitators are to be provided with comprehensive instruction (this manual). This limited instructional-huddle assumes facilitators have prior experience in facilitation, are familiar with GSG, and have a basic understanding of urban design and active transportation.

Instructions

The lead facilitator is to guide this activity.

1. Review Instructions.
   i. Review the GSG process (i.e. game-play) with the GSG Gameplay Overview.
   ii. Remind team facilitators of the time constraints and that they will be provided with one-minute warnings.
2. Distribute players among available facilitators and tables.
3. Address any unforeseen questions.
4. Provide materials for each instructor and ask them to review the contents.

Materials Per Team Facilitator:

- Collaborative Street Design Map (1)
- GSG Team Packages per class: ¹ (1)
  - Markers/Pencil Crayons
  - Deck of design cards (1)
  - Mini-Street Design Booklet (Street Design 101, Overview of GSG Gameplay, Individual ‘Board’ or Map) (6)
  - Scenario Cards-A
- Collaborative Street Design Map (1)
# Gameplay Summary

**GSG Foundational Objective:** Players are to collaboratively redesign neighbourhood streets to accommodate their active transportation needs.

<table>
<thead>
<tr>
<th>Phase</th>
<th>HS: Time</th>
<th>ES: Time</th>
<th>Foundational Objective</th>
<th>Description &amp; Facilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Game Room Prep</td>
<td></td>
<td></td>
<td></td>
<td>The GSG requires a particular classroom set-up. Players will participate in various manners as individuals, in teams of 4-6, and as a classroom. The following instructions will ensure a game ready classroom/space.</td>
</tr>
<tr>
<td>Pre-Game Instructional Huddle</td>
<td>10</td>
<td>10</td>
<td></td>
<td>Ten minutes prior to the GSG, the lead facilitator is to gather the team facilitators in a huddle and review the gameplay (instructions), provide materials, adapt to the classroom configuration and address any unforeseen concerns.</td>
</tr>
<tr>
<td>Intro &amp; Brainstorm</td>
<td>10</td>
<td>6</td>
<td></td>
<td>Encourage players to draw upon their experiential knowledge and share their observations and aspirations for local active transportation (i.e. local knowledge).</td>
</tr>
<tr>
<td>Mini Street Design</td>
<td>12</td>
<td>6</td>
<td></td>
<td>From this point until the vote all activities will be facilitated in teams of 4-8 players. Use the ‘Mini-Street Design Booklet’ to build your team’s knowledge of street design &amp; the GSG tools (cards, maps, &amp; drawings). First discuss different street types, and then ask players to redesign a street individually.</td>
</tr>
</tbody>
</table>

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2 Elementary school version is 45 mins
<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Back</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Build player capacity to communicate ideas through various means (i.e. orally, using their small design map, using the design cards)</td>
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<tr>
<td>This activity builds upon the last by encouraging the players to practice using the GSG design tools (i.e. <em>small design maps &amp; design cards</em>) for peer-to-peer communication, a critical component of collaboration. Facilitate a ‘share back’ of one or two design solutions generated in ‘<em>mini street design</em>’ (max 45-60s each).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Street Team Transformation! *3</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Build capacity to collaboratively and inclusively dialogue challenging concepts amongst one’s peers.</td>
<td></td>
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</tr>
<tr>
<td>Green Street Team Transformation is the heart of the GSG process, because this activity is where youth feedback/preferences are collected for the sponsor (CoV). In teams players are to transform the street in response to the scenario cards. Support your team as needed, but give enough space for autonomous play. Remind your team that to win they must attract the most votes and that collaboration is the best strategy.</td>
<td></td>
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</tr>
<tr>
<td>Present Back/Vote</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Experience actively participating in civil society (i.e. advocating for the public and casting your support-vote).</td>
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</tr>
<tr>
<td>Every team is to present their map to the class in 1-2 minutes. Players will cast their votes based on the brainstorms and their active transportation design preferences. Help your team summarize and present their ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Validate players’ capacities and work; encourage greater participation in civic processes and civil society.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The lead facilitator is to give a short summary. Acknowledge the participants’ valuable contributions by verbalizing the challenge they have overcome, summarizing their ideas, and explaining how their designs are to be used by the city.</td>
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</tbody>
</table>
Gamification: Game Thinking & Curve of Interest

A strong indicator of effective game design is the ability to enable an immersive and effortless state of focused engagement known as *flow*. The GSG enables players to flow with a particular configuration of game mechanics that match player challenge with their increasing competence.

A curve of interest (fig.2) illustrates the degree of focused engagement a player experiences throughout the gameplay. A player cannot maintain focused play if a gameplay’s level of interest is not stable or increasing. This descriptive model (fig m) is therefore helpful in mapping the careful application of game thinking through the gameplay. Below, GSG game mechanics are summarized by sub-mechanism.
<table>
<thead>
<tr>
<th>Phase</th>
<th>Game Mechanic and Level of Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro &amp; Brainstorm</td>
<td><strong>Hook</strong>: Sparks the interest of players. Game immediately jumps into active brainstorm. <strong>Clear Goal</strong>: An unambiguous goal is fundamental to immersive game play. A clear goal is not instructional in nature; it is clear, direct and simple (i.e. “Kill the dragon or be killed” or “Win the most votes”). <strong>Epic Meaning</strong>: Players will be highly motivated if they believe they are working to achieve something great, awe-inspiring, and bigger than themselves. <strong>Loss Aversion</strong>: Influencing the player behaviour not through reward, but by avoiding punishment, varying punishments through status, access, power, loss of resources or being downgraded. <strong>Urgent Optimism</strong>: The desire to act immediately to tackle an obstacle combined with the belief that we have a reasonable hope of success. <strong>Challenges/Scenarios</strong>: If the gameplay is too easy, the players will not try. <strong>Choices</strong>: Empower users, make them feel engaged and ownership over their choices. <strong>Aesthetic</strong>: An appropriate aesthetic can reduce or remove noise and provide players with quick access to information. <strong>Countdown</strong>: This will create an incentive that causes increased initial activity. Activity then increases frenetically until time runs out, which is a forced extinction. <strong>Achievable Tasks and Scaffolding</strong>: Scaffolding is the sequential practice of providing the minimal amount of instruction required to increasing players’ self-sufficiency in a timely manner. If a person does not think they achieve the task they will disengage or simply never start in the first place. <strong>Choices</strong>: Empower users, make them feel engaged and like they have ownership over their choices.</td>
</tr>
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<td>Green Street Team Transformation</td>
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</tr>
<tr>
<td>Mini Street Design</td>
<td><strong>Aesthetic</strong>: An appropriate aesthetic can reduce or remove noise and provide players with quick access to information. <strong>Choices</strong>: Empower users, make them feel engaged and ownership over their choices. <strong>Vote-Win</strong></td>
</tr>
<tr>
<td>Phase</td>
<td>Game Mechanic and Level of Interest (-continued)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Green Street Team**        | • **Achievable Tasks and Scaffolding**: Scaffolding is the sequential practice of providing the minimal amount of instruction required to increase players’ self-sufficiency in a timely manner. *If a person does not think they achieve the task they will disengage or simply never start in the first place.*  
• **Aesthetic**: An appropriate aesthetic can reduce or remove noise and provide players with quick access to information.  
• **Urgent Optimism**: The desire to act immediately to tackle an obstacle combined with the belief that we have a reasonable hope of success.  
• **Loss Aversion**: Influencing the player behaviour not through reward, but by avoiding punishment, varying punishments through status, access, power, loss of resources or being downgraded.  
• **Challenges/Scenarios**: If the gameplay is too easy, the players will not try.  
• **Countdown**: This will create an incentive that causes increased initial activity. Activity then increases frenetically until time runs out, which is a forced extinction.  
• **Choices**: Empower users, make them feel engaged and ownership over their choices. |
| **Transformation!**          |                                                                                                                 |
| **Present & Vote!**          | • **Vote-Win**  
• **Aesthetic**: An appropriate aesthetic can reduce or remove noise and provide players with quick access to information.  
• **Instantaneous**: Are there aspects of your experience now that are delayed but could be more exciting if they were real-time? |
START High School Version!

Foundational Objective
Teams are to collaboratively redesign the street to accommodate their active transportation needs. Every player has one vote and at the end of the game the team with the most votes is the winner!

*Time required:* 75 minutes
Introduction/Brainstorm:

**Time:** 10 mins

**Foundational Objectives:**
- Facilitate a class wide brainstorm. Prompt participation by asking players to share their ‘Fun, Safe, & Easy’ active transportation ideas. Encourage players to draw upon their experiential knowledge (i.e. local knowledge).

**Learning Outcomes:**
- Collective awareness of neighborhood assets (local knowledge)
- Livability
- Their ability to influence decision-makers
- Civic Goals
- Active Transportation
- Experiential knowledge

**Description:**
*Begin with* a class-wide introduction to the topic through a brainstorm on the term ‘livability.’ The player-generated brainstorm is the criteria to win the GSG. As a result the brainstorm frames player decision-making in the subsequent *Mini Street Design* and *Group Street Design*.

The lead facilitator is to use engaging rounds of closed and open questions to facilitate dialogue. Dialogue in the brainstorm is to be iterative and collaborative as participants’ contributions will build off of each other’s input. There

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4. When working with elementary schools we simplified the brainstorm by asking the following questions “what fun activities do you do in your neighbourhood?” and then moved on to ask “what stops you from doing these activities?”

5. The difference between open and closed questions is the length of the response.

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‘Fun, Safe & Easy’

*The City of Vancouver* wants feedback on local youths’ concerns regarding *inclines/slope, traffic, ‘greening,’ programming and route selection*. These terms are jargon, and both youth and adults have trouble engaging with them. To address this issue and encourage engagement, the GSG introduces the simple rubric of *Fun, Safe & Easy*.

Using more accessible terminology allows participants to better understand and contribute based on their local knowledge and preferences.

*Fun* is the idea that place or design could spark enjoyment.

*Safe* allows for a more personal reflection of local concerns.

*Easy* is about making things accessible to those involved.
should be at least two levels of inquiry. The first level is when participants are introduced to the term ‘livability’. The term is far too broad and inaccessible- but cut the term down to just ‘live’ and a brainstorm will begin. Ask “What do you need to live well?” Based on the answers from previous question you will move on the level of inquiry by asking “What would [idea/value] look like in your community?” Expand even further by prompting students and their idea/value with the “How could [idea/value] be done in a ‘Fun, Safe, & Easy’ way?”

**Resources/ Prep**: Chalk, board and surveys (one per participant). Place one survey at each desk and as participants arrive ask them to fill out the survey. The survey will help settle the class, and get people thinking about the topic.

**Facilitators Required**: 2
- Lead Facilitator (1)
- Scribe (1)

**Instructions**:
1. **Introduce yourself to the group** and tell them that you here on to seek input on the PGCATC on the behalf of the CoV.
2. **Tell them their feedback can influence** the design of their neighbourhood by influencing decision-makers at the COV.
3. **Play**: Communicate that the way we are going to workshop urban planning is by playing a board game and there is going to be a winner!
4. **Map the community assets and opportunities using local knowledge**: Write ‘Livability’ on the board and break it to ‘live’.
   a. **Ask players** “What do they need to live in their community?”
5. **Remind players that they are to win by getting the most votes** (i.e. appealing to the group’s values). Therefore in their teams players will need to play cooperatively and collaborate on the design- ‘if you can’t get the person beside you to go along with your design, how are you going to get others to vote for the design?’

---

*E.g. Closed Question: Did you cycle to school today? A: Yes/No.
Open Question: What do you enjoy about your cycle this morning? Fresh air, the sun, etc.*

Closed questions are ideal to open a subject, they are less daunting to answer and an entire classroom can participate (i.e. hands up). Closed Questions are great way to warm-up or encourage participants to go deeper with Open Questions. Open Questions are the opposite Close Questions, they provide more information and allow the group to go deeper or explore an issue.

---

6 Encourage group participation and confidence by highlighting the participants’ local knowledge and its value.
Example Script:

As participants arrive ask them to fill out the survey. The survey will help settle the class, and get people thinking about the topic. The survey should only take three minutes and is often completed before the GSG begins.

[Both facilitators will stand near the chalkboard]

Today we are going to play a game! My name is ***** and today the game is redesigning our neighbourhood streets! This is a competition and you are already sitting with your team. Who thinks they are going to win? To win your team needs to get the most votes.

At the end of the game the entire class is going to vote on which team/table they prefer the most. You don’t have to vote for your team, if you like somebody else’s map you can vote for them. Focus on working with your team. If you can design your streets so that they work for everyone at your table you are more likely to get their vote and be able to steal votes from other teams. The people you are sitting beside are your team and you need work with them.

Raise your hand if rode your bike to school today? Raise your hand if you like to cycle?
Now with hands, How about who walked to school today?

[Ask a student a specific student]

What do you enjoy about your ride/walk?

What do walking, cycling, and skateboarding have in common? They are all forms of active transportation. Active Transportation is using your body to power yourself around. Today we are to look at ways to make your neighborhood Safe, Fun, and Easy to get around using your body. To do that we are to going redraw our streets!

[Lead: The intention is to have the participants create their own rubric or guiding principles to guide and evaluate the design. When asked how a topic may relate to livability “nature” ask students to find ways to implemented their values in a Fun, Safe, & Easy way]

[Write in the center of the board “Livability”]

On the board we have a word call “livability”, let’s break it down. “Live” and “Ability”.

In this community we need many things to thrive, what are some things that you need to ‘live’ well?

[Lead: answers may seem off topic, but continue to engage until you have enough topics to transition to in the topic of livability]

[Scribe: Write down on the board as much as you can]
Ok I see we have ‘education’ on the board. Let’s build on that, how do access or get to school?

[Refer to the survey to prompt the class]

Ok you use the bike route to get to school, how could the bike path be designed in better way? What could make it more Fun, Safe & Easy?

[Once you have built the brainstorm up to three levels, summarize and tell the Players they just create the definition of winning the GSG]

Would you like to live in neighbourhood that has these ideas/values as guiding principles?

Great- Because in your small groups/pods you are about to redesign your neighbourhood streets and the way to WIN is on that board.

[Transition]
**Mini Street Design**

**Time Allocated:** 12 minutes

**Foundational Objective:**
This point forward until the vote all activities will be facilitated in teams of 4-8 players. Use the ‘Mini-Street Design Booklet’ to build your team’s knowledge of street design & the GSG tools (cards, maps, & drawings). First discuss different street types and then ask players to individually redesign a street.

**Learning Outcomes**
- Introducing participants to GSG tools
- Preparing players for the active gameplay the large map
- Building visual communication skills

**Description:** This part of the process prepares the players for the large street design by introducing new concepts and familiarizing them with the GSG gameplay. Following the brainstorm, team facilitators start their active role and engage players in their small groups (the people they are already sitting with). Team facilitators will distribute one 11x17 ‘*Mini Street Design Booklet*’ to each player. Using the booklet, the team facilitators will ask for local examples of various street typologies. Next players will individually redesign a street using the brainstorm and ‘**Fun, Safe, & Easy**’ design principles. Team facilitators will incrementally prompt players using the GSG’s *Urban Design Elements*.

**Resources/ Prep:** GSG Pod Package-A: Markers/Pencil Crayons, a deck of design cards, Mini-Street Design Booklet (Street Design 101, Overview of GSG Gameplay, Individual ‘Board’ or Map) (6), and Scenario Cards A.

**Facilitators Required:** 6
Lead Facilitator (1)
Team Facilitators (TF): 1 per pod/group\(^7\) (5)

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\(^7\) Pods/Groups have may have between 2-6 participants.
Instructions:

1. TFs take an active role in facilitating the rest of the GSG process. TFs need to ensure each player has a *Mini Street Design Booklet* in front of him or her.

2. Using the first page of the booklet, introduce the three street typologies and provide an overview of the different street types by asking for local examples of each. Optional Prompts:
   i. Ask players which road is moving the most people. Players will most likely choose the auto-centric road. Ask them to count to the people on the road.
   ii. Ask players which road they would feel most comfortable cycling on.

3. TFs are to ask students to draw how they could make their own street more *‘Fun, Safe, & Easy’*. Use the ‘Mini Street’ located at the end of the booklet. Instead of providing all the instructions before starting, get players started drawing and progress into instructional prompts. Mini Street Design Prompts:
   i. **Brainstorm**: Refer players to the brainstorm of design principles for ideas and directions
   ii. **Grid Pattern**: Ask players why the street has a grid pattern. Encourage participants to consider the reality of limited space and trade-offs.
   iii. **Design Cards**: Place half a deck of Design Cards in the center of the table and distribute 2 cards to every player. The Design Cards are examples of Urban Design Elements players may consider including in their street design.
   iv. **Scenario Cards**: If time allows, recite one of the Scenario Cards. Players will most likely not have enough time address it, but it will better prepare for live gameplay.

4. **Warn players when there is one minute of design time left and that they will be asked to share one element from their map.**

{Transition}

\[\text{8 Design Prompts: TF are to pace their prompts, giving players a chance to take on one idea at a time.}\]
Share Back

Time Allocated: 10 minutes

Foundational Objective:
- Facilitate a ‘share back’ of design solutions generated in ‘Mini Street Design’ (max 45-60s each).
- This activity builds upon the last by habituating players with the GSG’s design tools for peer-to-peer communication (i.e. small design maps & design cards).

Learning Outcomes:
Prepare teams for effective communication during the live gameplay.

Description: In teams players take turns sharing a select amount of their design ideas.

Resources/ Prep: None

Facilitators Required: 6
- Lead Facilitator (1)
- Team Facilitators (TFs): 1 per pod/group (5)

Instructions:
1. Ask participants to share one idea from their mini-street design.
   a. The share back needs to be tightly facilitated. If players share more than one idea or element other players will not get a chance to share.
   b. If time is limited, pair players with the person they are sitting beside and ask them to share between themselves.
2. Prompt or refer players to the game’s goal- to make streets more ‘Fun, Safe, & Easy’ (i.e. ask “how did you design your street to be more fun?”).
3. Encourage participants to use the ‘tools’ they have at their disposal to share their ideas.
4. {Transition}

---

9 This activity must be tightly facilitated. There is limited time and it is important that all participants share at least one item.
10 Pods/Groups have may have between 2-6 participants.
Green Street Team Transformation!

**Time Allocated:** 25 minutes

**Foundational Objective**
In teams players are to transform the street in response to the scenario cards. Support your team as needed, but give enough space for autonomous play. Remind your team that to win they must attract the most votes and that collaboration is the best strategy.

**Learning Outcomes:**
- Communication Skills (verbal, visual)
- Collaborative Decision-Making
- Teamwork
- Transportation design challenges

**Description:** In this activity TFs will task their team with re-imagining a larger map section or ‘board’ which comprises of six streetscape categories. The Group Street Design is the heart of the GSG process, for this activity is where youth feedback/preferences are collected for the sponsor (CoV). Players are asked to include elements from the brainstorm and their individual maps in order to bring a variety of ‘**Fun, Safe, & Easy**’ improvements to their neighbourhood.

**Resources/ Prep:** Collaborative Street Design Map, Post-It notes, Scenario Cards, Markers, and Design Cards

**Facilitator Required:** 6

- Lead Facilitator (1)

---

**Stakeholder Feedback**

The Group Street Design is the heart of the GSG process, for this activity is where youth feedback/preferences are collected for the sponsor (CoV).

**Tips for Players!**

Win the game by collaborating & first winning over your teammates. ‘If a player cannot convince a fellow teammate of the merit of their idea/designs, it is doubtful they will be able convince others to favourably cast their votes.’

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12. Except for the Collaborative Street Design Map, the previous street design activity will provide TFs with the remaining of the prep materials.
Team Facilitators (TFs): 1 per pod/group¹³ (5)

Instructions: The team facilitators guides this activity

1. Remind participants how to win. The game is won by receiving the most votes. The best strategy is to satisfy the design principles set out in the brainstorm. “If you can’t get the person beside you to go along with your design, how are you going to get others to vote for the design?”
   a. Read Scenario Card A and ask students to communicate their ideas.
   b. Tip: Ask participants to start designing by collaborating with their neighbour. Start small instead of stalling; players will eventually collaborate in a table-wide collaboration.
   c. Remind players of their great ideas from the previous activities

2. Prompts:
   a. Remind participants how to win the game.
   b. Brainstorm: Refer players to the brainstorm of design principles for ideas and direction.
   c. Design Cards: If the half-deck of Design Cards have yet to be used, distribute them to the players.
   d. Scenario Cards: As time allows recite an additional Scenario Card every ten minutes. Players will be challenged to renegotiate their design and it will prompt new and unique youth-generated solutions.

3. Five minutes remaining: Tell the team they will need to nominate one or two people to present back their ‘board’ to the class.

¹³ Pods/Groups have may have between 2-6 participants.
Team Presentations & Vote!

Time Allocated: 15 minutes

Foundational Objective:
Experience actively participating in civil society (i.e. advocating for the public and casting your support-vote)

Learning Outcomes
- Public Speaking
- Group decision-making
- Advocacy
- Peer-evaluation

Description: Teams will present a one-minute summary of their Collaborative Street Design Map. Preceding the presentation a vote will determine the winner.

Resources/ Prep: None

Facilitator Required: 6
- Lead Facilitator (1)
- Team Facilitators (TFs): 1 per pod/group\(^\text{14}\) (5)

Instructions: Both the team and lead facilitators are active.

1. **The lead facilitator** is to ask the teams to do a one-minute summary of their collaborative street design (team facilitators are to support their team). Participants have been asked to prepare a brief summary during the design phase.
   i. If necessary **team facilitators are to help their team summarize their work.**
   ii. Remind the team to speak to the **brainstorms design principles.**
2. **Vote-** After the presentations ask students to vote with their hands and select a winner.

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\(^{14}\) Pods/Groups have may have between 2-6 participants.
3.   Cheer!!!!!!!!
4.   Team facilitators are then to **collect all Group Street Design Maps**, secure their order by taping them off, and **labelling** them (date/number of players/location/time/demographic).
Summary

Time Allocated: 3 minutes
Foundational Objective:
Acknowledge participants valuable contributions by verbalizing the challenge they have overcome, summarizing their ideas, & explaining how efforts are to be used in the civic process.

Learning Outcomes

Reflect on the processes of:
  a. Collaboration
  b. Decision-making
  c. Local knowledge

Description: The lead facilitator is to give a short summary. The goal is to validate the players’ efforts and encourage them to continue to participate.

Resources/ Prep: None
Facilitator Required: 1
Lead Facilitator (1)

Instructions:

1. The lead facilitator is to congratulate the players and summarize the process.
   a. Players not only collaborated and redesigned their streets, they did it according to their needs (the brainstorm).
   b. The players themselves decided on the winner.
   c. The players made all the decisions (terms, designs and winners).
2. Remind players how their efforts are valued and part of the greater process neighbourhood process.
3. Lead facilitator thanks players for their time.
START Elementary Version!

Foundational Objective:
- Players are to collaboratively redesign neighborhood streets to accommodate their active transportation needs.

Note:
- The Elementary School is 45 minutes.\(^{15}\) The workshops vary in length because the gameplay for older youth includes greater autonomy, and complicity and depth of play (i.e. more scenarios). An Elementary version of the “Intro & Brainstorm” has been created. As for the rest of the instructions, adjust for time and follow the high school version.

\(^{15}\) The duration of the game is based on the players’ autonomy, depth and competency, as well as available class time. The high school version requires more time because players are given more autonomy. Older youths are also asked to address more scenarios and their cumulative challenges. The Vancouver School Board periods are also longer for older youth, with 75min periods for secondary students and 45-60min periods for elementary students.
Introduction/Brainstorm:

**Time:** 8 minutes

**Foundational Objectives:**
Facilitate a class-wide brainstorm. Prompt participation by asking players to share their ‘Fun, Safe, & Easy’ active transportation ideas. Encourage players to drawn upon their experiential knowledge (i.e. local knowledge).

**Learning Outcomes:**
- Collective awareness of neighbourhood assets (Local knowledge)
- Livability
- Ability to influence decision-makers
- Civic goals
- Active transportation
- Experiential knowledge
- Public speaking

**Description:** A class-wide introduction to the topic through a brainstorm. The player-generated brainstorm is the criteria to win the GSG. As a result the brainstorm frames player decision-making in the subsequent *Mini Street Design* and *Group Street Design*.

The lead facilitator is to use engaging rounds of closed and open questions to facilitate dialogue. Dialogue in the brainstorm is to be iterative and collaborative as players’ contributions will builds off of each other’s input.

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16 The difference between open and closed questions in the length of the response. 

17 e.g. *Closed Question*: Did you cycle to school today? *A*: Yes/No.
Resources/ Prep: Chalk, board and surveys (one per participant). Place one survey at each desk and as participants arrive ask the participants to fill out the survey. The survey will help settle the class, and get people thinking about the topic.

Facilitators Required: 2
Lead Facilitator (1)
Scribe (1)

Instructions:
1. Introduce yourself to the group and tell them that you here to seek input for the PGCATC on the behalf of the CoV.
2. Tell them their feedback can influence the design of their neighbourhood by influencing decision-makers at the COV.
3. Play- Communicate that the way we are going to do this is by playing a board game and that there is going to be a winner!
4. Map the community assets and opportunities using local knowledge.\(^{18}\)
   a. The scribe is to write ‘Community’ on the board
      i. Ask “what fun activities do you do in your neighbourhood?”
      ii. Ask “what stops you from doing these activities?”
   b. Based on the answers from previous question you will move on the level of inquiry by asking “What are some FUN ways we overcome these barriers? How about SAFE, and EASY?”
5. Inform the players the brainstorm has created a set of guiding principles for the winning board, as it reflects their understanding of ‘Fun, Safe, & Easy.’\(^{19}\)

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Open Question: What do you enjoy about your cycle this morning? Fresh air, the sun, etc.
Closed questions are ideal to open a subject, they are less daunting to answer and an entire classroom can participate (i.e. hands up). Closed Questions are great way to warm-up or encourage participants to go deeper with Open Questions. Open Questions, are the opposite Close Questions, they provide more information and allow the group to go deeper or explore an issue.

\(^{18}\) Encourage group participation and confidence by highlighting the participants’ local knowledge and its value.

\(^{19}\) When working with elementary schools we simplified the brainstorm by asking the following questions “what fun activities do you do in your neighbourhood?” and then moved on to ask “what stops you from doing these activities?”.
6. **Remind players that they are to win by getting the most votes** (i.e. appealing to the group’s values). Players therefore need to play cooperatively and collaborate on the design. “*If you can’t get the person beside you to go along with your design, how are you going to get others to vote for the design?*”

**Example Script:**

Both facilitators will stand near the chalkboard:

- "Today we are going to play a game! My name is _______ and today the game is redesigning our neighbourhood streets!"
- [Lead: The intention is to have the participants create their own rubric or guiding principles to guide and evaluate the design based on the prompts ‘*Fun, Safe, & Easy*’]
- “What fun activities do you do in your neighbourhood?”
- “What stops you from doing these activities?”
- “What are some **FUN** ways we overcome these barriers? How about **SAFE**, and **EASY**?”
- “Would you like to live in neighbourhood that is ___________ (summarize the brainstorm)?”
- “Great! Because in your team you are about to redesign your neighbourhood streets and the way to **WIN** is on that board.”

[Transition]
Data Collection

Data was collected from the 56 collaborative street design maps created by 371 participants over 15 workshops. The design elements present on each map were analyzed for their level of incidence (the number of times they appeared) and proximity to a) other design elements and b) the six streetscapes and four intersections.

To control for the variability of design and style found in each unique map, the GSG Team chose to analyze the general incidence of urban design elements rather than their intensity. Under an intensity-based analysis a street with one covered area, 18 streetlights and one drinking fountain would indicate a stronger priority for streetlights when this may not be the desired intention. An incidence-based analysis would indicate a preference for both streetlights and covered areas, allowing the comprehension of an overall relationship of preferences across data sets.

The GSG game data sets were generated based on the Comox-Helmcken Greenway Child and Youth Assessment Tool. A variety of amendments were made to accommodate the GSG workshop methodology. Additional indicators were derived from the Urban Design Element cards, as well as Specific Street improvements provided by the children and youth who participated in the workshops, to create a total of 74 individual indicators grouped into 11 categories. The data sets generated from this analysis have been inferred as indicators for preferred mobility and streetscape options within the Point Grey Cornwall project study area.


Analytical Framework

All design elements were manually counted according to their age group and school, and then inputted into six streetscape categories:

1. Main street
2. Bike lane
3. Right neighbourhood street (park and schoolyard adjacency)
4. Left neighbourhood street (residential and school adjacency)
5. Park
6. School and schoolyard

Upon initial data collection, individual indicators were counted and then grouped into five discrete data sets:

1. Overall incidence
2. Incidence according to streetscape category
3. Incidence corresponding to categories of fun
4. Incidence corresponding to categories of safe
5. Incidence corresponding to categories of easy

The GSG Team categorized design elements into a rubric of ‘Fun, Safe, & Easy’ according to their intended primary use. The team defined these terms as follows:

- Fun: Design features that encourage frequent use by providing enjoyment.
- Safe: Design features that protect users from real or perceived harm by mitigating dangerous factors and enhancing protective elements.
- Easy: Design features that enable convenient use by improving accessibility and proximity.

Several elements fit within two categories and were counted twice (for example, streetlights were grouped into both Safe and Easy).
APPENDIX A. PGCC PROJECT: Youth Engagement Summary Report

The Green Streets Game enables participants to examine and collaboratively redesign their streets into fun, safe, and easy public spaces. This report is a summary of youth recommendations for the Point Grey-Cornwall Active Transportation project.

QUESTIONS

How do you have fun in your neighbourhood?
What stops you from having fun?
How can we make it safer and easier to have fun in your neighbourhood?

PARTICIPATING SCHOOLS (VANCOUVER)

Henry Hudson  |  General Curzon  |  Daydream  |  Kitsilano High

WORKSHOP COMMITMENTS

15 × 25 × 60

OVERALL PROJECT RECOMMENDATIONS & PRIORITIES

FUN  |  SAFE  |  EASY

COOL DESIGN RECOMMENDATIONS

1. Neighbourhood food carts
2. WiFi trees
3. Retractable covered sidewalks
4. Mid-block street crossings
5. Creek and stream daylighting

For more information on the project and/or to see the full report please follow the link or contact:
http://vancouver.ca/CREATE-TRANSPORTATION/point-grey-cornwall

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APPENDIX
B.1
DESIGN
CARDS

GREENING

PLACES TO SIT

ACTIVE/GREEN TRANSPORTATION

FOOD
PUBLIC ART

- Mosaic
- Public Art

- Tufted Walkway
- Water Fountain
- Painted Walkway

GROUP ACTIVITIES

- Basketball Half Court
- Bocce Ball
- Farmer’s Market

- BBQ Pit
- Notice Board
- Rock Wall

- Water Fountain
- Cross Walk Button
- Mobile Food Vendor
- Garbage Can

- Playground
- Public Restroom
- Covered Walkway

- Wild Card
- Wild Card

NAME IT: ___________________
NAME IT: ___________________
#1a: Scenario Card

(Read Aloud)

Sarah/Thomas is a grade (elementary) ____ student at ____ School. Every morning her mom drives the 8 blocks to school, and after class she walks home with friends. Sarah and her friends have decided that they want to ride their bikes to school, but their parents are concerned. They say that the neighbourhood roads are too narrow, and they are also worried about crossing the busy street next to their school. Re-imagine the streets so they’re safer for Sarah and her friends to bike to school.

At the end of the activity, your facilitator will be evaluating your work and sharing key points with the whole class. Extra points for making the street more fun!

Focus: Bike safety, friends, schooldays

#3: Scenario Card

(Read Aloud)

Erica and Rachel are grade 7 students at ____ School. On Fridays they eat lunch at the bakery across the street from the school. Last week a pedestrian was hit at crossing beside the school. Re-imagine the streets so they are safer for Erica and Rachel to get across for lunch.

At the end of the activity, your facilitator will be evaluating your work and sharing key points with the whole class. Extra points for making the street more fun!

Focus: Pedestrian safety, friends, schooldays

www.GreenStreetsGame.com
Street Design 101

WHAT IS POSSIBLE?

Here are 3 examples of street design:

1. Typical Neighbourhood
2. Separated Bike Lanes
3. Pedestrian Focus

SOURCE: http://bostoncompletestreets.org/
Overview of GSG Game-Play

**Gameplay Summary (high school 75 minutes + prep)**

**OBJECTIVE:** Players collaboratively redesign neighborhood streets to accommodate their active transportation needs.

**PRE GAME HUDDLE**
- 10 min

**INTRO & BRAINSTORM**
- 10 min

**MINI STREET DESIGN**
- 12 min

**SHARE BACK**
- 10 min

**GREEN STREET TEAM TRANSFORMATION!**
- 25 min

**PRESENTATIONS & VOTE!**
- 15 min

**SUMMARY**
- 3 min

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**Facilitate a classwide brainstorm.** Prompt participation by asking players to share their "Fun, Safe, Easy" active transportation ideas. Encourage players to draw upon their experiential knowledge (e.g., local knowledge).

**This point forward until the 'vote' all activities will be facilitated in teams of 4-8 players. Use the "Mini-Street Design Bundle" to build your teams' knowledge of street design & the GSG tools (maps, scenario cards & drawings). First discuss different street types, and then ask players to individually redesign a street.**

**Facilitate a 'share back' of 1 or 2 design solutions generated in "Mini Street Design" (max 45-60s each). This activity builds upon the last by practicing using the GSG design tools (i.e., maps & scenario cards) for peer-to-peer communication, a critical component of collaboration.**

**In teams players are to transform the street in response to the scenario cards.**

**Support your team as a mentor, but give enough space for autonomous play. Remind your team that to win, they must attract the most votes and that collaboration is the best strategy.**

**Every team is to present their 'map' to the class, 1-2 mins. Players will cast votes their votes based on brainstorm and then their active transportation design preferences. Help your team summarize and present their ideas.**

**Acknowledge the participants valuable contributions by verbalizing the challenge they have overcome, summarizing their ideas, and explaining how their designs are to be used by the city.**

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www.greenstreetsgame.com
Individual ‘Board’ or Map (11x17)
APPENDIX B.4 LARGE BOARDS (24x36)