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EN-C01

MAKING A CASE FOR TOD TO THE PUBLIC– COMMUNICATION STRATEGY

A creative guide to disseminate information to public and regional bodies and express the importance and benefits of TOD

Type: Reference Document

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ABOUT THE ENABLE TOOL

One key enabling issue around TOD is the difficulty of cross-sectoral integration; without it, transport, housing and land-use policies are developed in isolation and when aggregated in an attempt at TOD, the nuances of the trade-offs between sectors are lost. As TOD happens at different scales under many jurisdictions, it is essential that practitioners understand the motives of each stakeholder, possible trade-offs, and how interests can be better aligned for successful implementation.

In addition, much of TOD planning and implementation relies on public and private institutions with little public participation, beyond the election of public officials in developing countries. In practice, building ownership and developing buy-in from the general public, with a strong sense of commitment from the political leadership, makes the difference between the success and failure of TOD initiatives. Before embarking upon the public participation process, it is important to identify project champions who can influence public opinion. Ineffective and untimely engagement of influencers can lead to the breakdown of the TOD planning process, as was seen in Mumbai during the public review and consultation of the TOD-based Development Plan.

Participatory planning mechanisms offer opportunities to citizens (such as voting, public hearings, etc.) to have a role in the governing and decision-making processes in their neighborhood, their city and beyond. The improvement of the quality of life of current and future residents is a core value of Inclusive TOD. However, there is a need for public participation and stakeholder engagement to increase the inclusiveness of TOD and ensure that the beneficiaries' concerns are addressed and they are convinced of the personal and city-wide benefits TOD brings. (WB/WRI 2015)

FINDING PROJECT CHAMPIONS

Project champions can be found not just in local politics, but also in the local community. Finding champions helps to ensure that your TOD project is perceived as a civic project that is aligned with community interests, rather than being imposed from the top-down. It also encourages a project's longevity, particularly in light of the inevitable changes in political leadership or project management over the life of a project. Project champions can be local civic workers, landowners, leaders of community groups, academic institutions, media representatives or other well-known public figures in a particular community. Project champions should be someone that:

- Is known for bringing people together, rather than dividing a community
- Has strong relationships within the community that, ideally, span socio-economic classes, professions, and political beliefs
- Is able to speak articulately about the issues that have inspired the project and that may arise during the TOD process
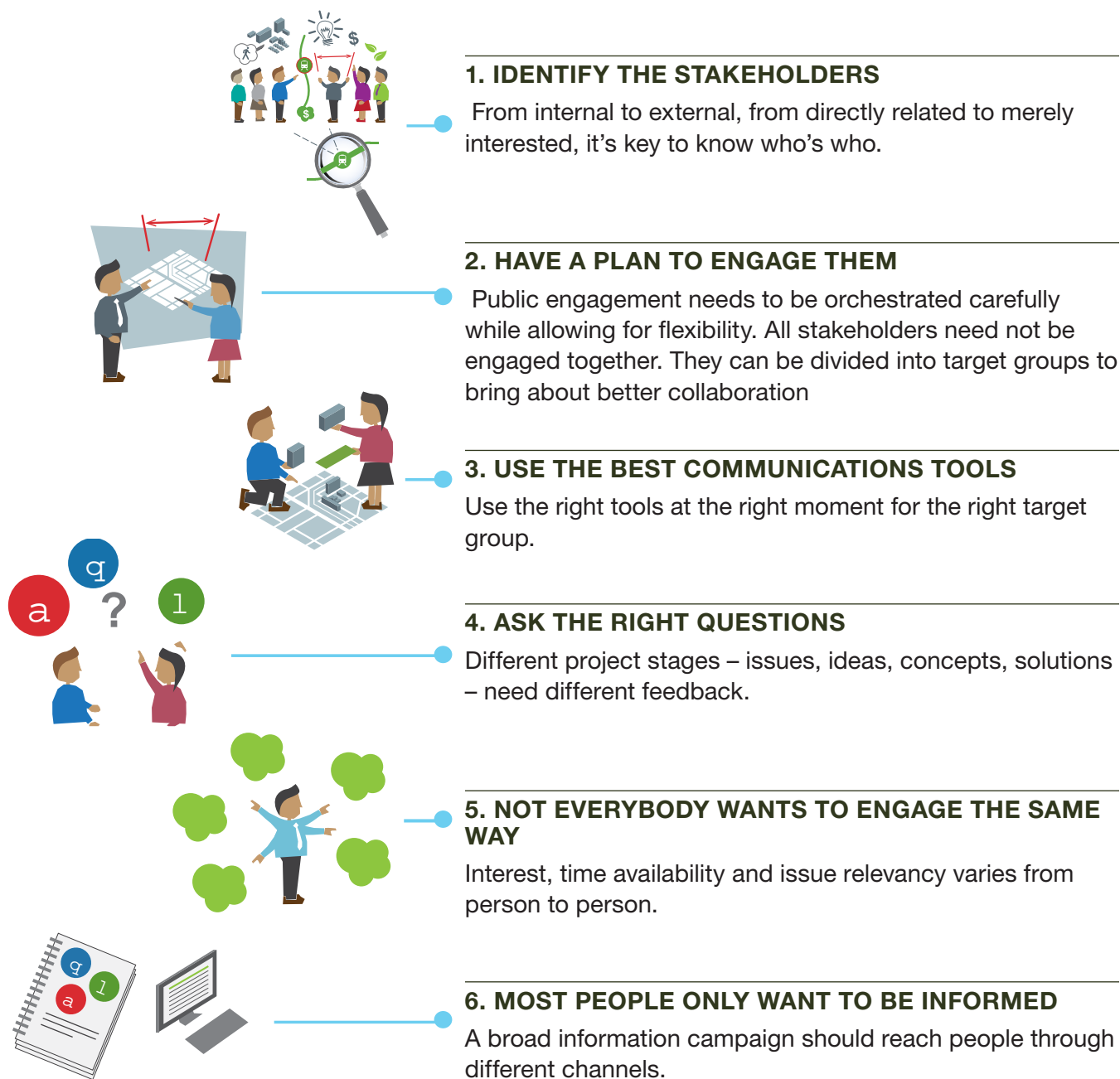
To be successful advocates, project champions must be personally convinced of the benefits of TOD initiatives before they can speak on behalf of the project. Project champions should be involved throughout the entirety of the planning process to ensure complete ownership and commitment to the TOD outcomes.

Project champions play an important role in the TOD process by bringing community members together in support of TOD through participation in community events, social networking and partnership creation. As highly involved and connected members of the community, they can address public grievances early on and rally support and community buy-in. For example, if a project champion observes that community members are very concerned about project-induced traffic, they can relay this information to your TOD team and simultaneously provide concerned citizens with one-on-one attention and dialogue, before the issue impedes with the project. Empower your project champion with the project understanding, facts and figures that support the plan, and provide them with the support required to successfully communicate with the public. Strong project champions can drive the success of a TOD project and ensure the inevitable concerns of the public are managed throughout. Making strategic use of these valuable stakeholders is, therefore, essential to a successful project.

METHODOLOGIES

"Good TOD plans are 50% professional best practices and 50% local knowledge.

You can only access local knowledge through concerted public outreach."

1. IDENTIFY THE STAKEHOLDERS

From internal to external, from directly related to merely interested, it's key to know who's who.

2. HAVE A PLAN TO ENGAGE THEM

Public engagement needs to be orchestrated carefully while allowing for flexibility. All stakeholders need not be engaged together. They can be divided into target groups to bring about better collaboration

3. USE THE BEST COMMUNICATIONS TOOLS

Use the right tools at the right moment for the right target group.

4. ASK THE RIGHT QUESTIONS

Different project stages – issues, ideas, concepts, solutions – need different feedback.

5. NOT EVERYBODY WANTS TO ENGAGE THE SAME WAY

Interest, time availability and issue relevancy varies from person to person.

6. MOST PEOPLE ONLY WANT TO BE INFORMED

A broad information campaign should reach people through different channels.

7. A FEW PEOPLE WANT TO ENGAGE DIRECTLY

Curated direct participation events are necessary too, even in a digital world.

8. COMBINE PLANNING AND OUTREACH

Specially designed formats such as charrettes shorten timelines and increase buy-in.
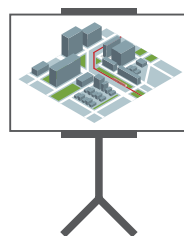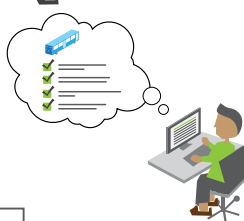
9. INCLUDE FUN EXERCISES

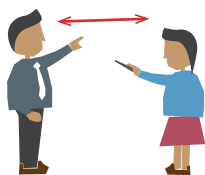Custom-tailored activities and games make it fun and meaningful for stakeholders to interact.

10. SOME PEOPLE DO NOT HAVE TIME TO ENGAGE

An online/social media engagement strategy can capture their (otherwise lost) input.

11. MAKE IT VISUAL

In a time-starved and attention-limited world, visually appealing, intuitive content is a must.

12. ENSURE TWO-WAY COMMUNICATION

Stakeholder outreach is as much about listening as it is about talking.

13. MAKE SENSE OF THE FEEDBACK

Stakeholder engagement is useless unless you connect the dots in a systematic way.

14. DON'T OVERDO IT – BE STRATEGIC

Outreach needs to be effective, cost-efficient and relevant for all participants.

TOOLS-CHARRETTE

A charrette is a creative burst of energy that builds momentum for a project and sets it on a course to meet project goals. It can transform a project from a static, complex problem into a successful, buildable plan. Usually, it is an intensely focused, multiple day session that uses a collaborative approach to create realistic and achievable designs that work."

(Source: Lindsay, G., J. A. Todd, S. J. Hayter, and P. G. Ellis. "Handbook for Planning and Conducting Charrettes for High-Performance Projects: Second Edition." National Renewable Energy Laboratory, 2009. doi:10.2172/965523.)

Planning / Design Charrette: A multiple-day, collaborative workshop lead by the core planning team that brings together residents, developers, and policymakers to create a feasible and "85% ready" TOD Community Concept Plan based on four feedback loops: VISIONING, IDEAS, CONCEPTS, AND SOLUTIONS.

TOD Board Game

"What we Heard" Playback & Voting

(Source: © IBI Group)

FIRST DAY
* Team introductions; "Gains & Pains" word exercise (a more up-to-date and participatory take on "SWOT" analysis);

SECOND DAY
* Fundamentals of TOD (both design and economic); playing of the "TOD Board Game", a hands-on exercise in which community residents layout a series of land use icons – streetscape improvements, lanes, transit service, etc. (the "T" of TOD); parks and plaza, public art, etc., and other "Open Space" attributes (the "O" in TOD; and townhouses, apartment buildings, retail shops, and schools (the "D" of TOD), into a series of competing alternative plans.

THIRD DAY
* A playback of "What We Heard" at the TOD board game, complete with real-time electronic voting for preferred options of the TOD component plans.

FOURTH DAY
* The unveiling of the TOD Community Concept Plan, the result of a marathon production run of 36 hours, normally culminating in a 100-slide presentation, shored up by twenty-to-thirty full size presentation boards and, always a community favorite, a time-lapse photo visualization of a select street/area within the TOD plan that illustrates the evolution of the "now" to the "next".

TOOLS-
INTERACTIVE ACTIVITIES

How do you liven up discussions around TOD, get participants thinking outside the box & get people to take a holistic & inclusive approach to community planning around stations?

Why not try a game?

TOD projects frequently involve the cooperation of multiple stakeholders with varying objectives and preferences for an optimized solution. Finding a mutually agreeable solution is of paramount importance in order to assure the successful completion of these projects; particularly when different stakeholders are splitting the costs because none can afford to finance the transit/land use development projects on their own.

Games are emerging as a useful platform for fostering meaningful dialogue on today's most pressing urban development issues. Through simulations, role-playing and even the use of LEGO blocks, interactive urban development and planning games can provide a fun and engaging way of bringing disparate groups of stakeholders to the table. These games

remove the threatening atmosphere often felt in more formal meetings, and allow participants to casually communicate with one another while collectively evaluating different paths of development.

Games can help simplify complex and seemingly insurmountable problems by detangling components and breaking them down into smaller, more comprehensible pieces. Furthermore, games that require role-playing can force participants out of their comfort zone helping them to begin to understand and view problems from a different perspective, such as through the eyes and experiences of a bicyclist, thus bringing light to issues they may normally overlook.

Interactive Board Games, Station Area Planning, City of Calgary, Canada

(Source: © IBI Group)

Some of the examples of Interactive games that force public and private sector stakeholders (including public) in planning and implementing TOD, role-playing, priority setting and balancing trade-offs, develop solutions and align interests in a non-threatening environment are outlined below. These games are used as Global best practices and have been used by the project team for TOD projects developed and developing countries alike.

Most of these games are organized as sessions/downtime activities as a part of TOD Charrettes (typically organized as a one/two-day activity). An overview of the TOD charrette process is also presented at the end to identify where these gaming sessions can be accommodated in the charrette agenda.

Activity 1: Card Game - Play your best Hand

Activity 2: Ideas/Projects cost Money

Activity 3: Speed Networking – Hear & Share your stakeholders/your Issue under 5 minutes, & jointly devise a solution

Activity 4: Issues & Ideas Wall

Activity 5: Preference Boards

Activity 6: TOD Interactive Board-game

Activity 7: Road Safety Workshop

Other Virtual Games

TOD K P

ACTIVITY 1: CARD GAME - PLAY YOUR BEST HAND

INTENT:

Identification of key priorities/issues.

WHO ARE THE PLAYERS:

- Typically limited to Public Sector/Agency Stakeholders.
- Can be extended to select Private stakeholders such as NGO's/Developers/ Business Improvement Groups.
- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Workshop/Charrette Setting. Stakeholders are sitting around a table in random groups of 6 to 8 people.

IDEAL ENGAGEMENT SIZE:

Maximum 50-75 Stakeholders. Gathering feedback and reporting becomes time-consuming beyond this size of stakeholders.

TYPICAL TIME:

30 minutes (10 minutes to play the game and 20minutes to discuss reporting).
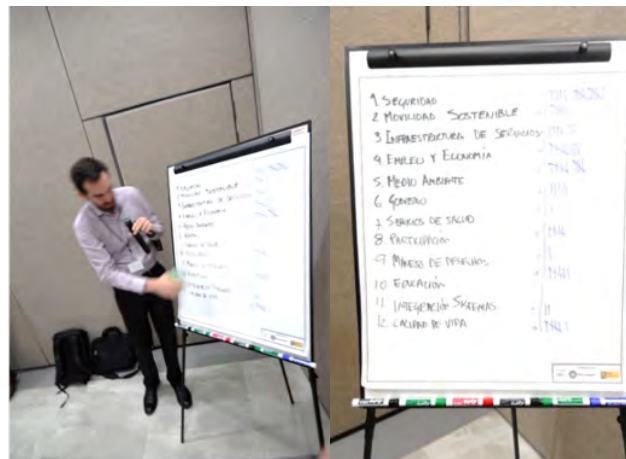
DESCRIPTION:

- A suit of cards (similar to a suit from a deck of cards) 12 cards with an additional Wild Card (similar to the Joker from a deck of cards) is pre-prepared with each card representing one key issue facing the community.
- The list of priorities/issues is pre-curated with the assistance of the Client prior to the workshop.
- Each stakeholder is asked to "play their best hand" i.e. lay 3 cards on the table which represent their three priority issues.
- The stakeholders also have the option of writing their own issue on the wild card in case the 12 cards don't represent priority issues.
- The cards form each stakeholder are collected and the scores are tallied (while other components of the workshop/ charrette are in process) by the Project team.
- A member of the project team then reports back on the ranking of the priorities.
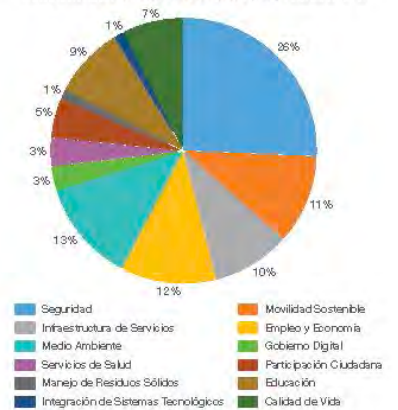
OTHER SUGGESTIONS

- The Wild Card may carry the photo of the Project Champion/Political leader of the Community/City.
- The rest of the 9 cards are carried back by the Stakeholders as workshop souvenirs. Information related to the project, key contacts etc. can be provided on the back of the card.

1 Seguridad — Seguridad Personal, Vigilancia del Espacio Público, Corresponsabilidad Social — Espacio Público Seguro

2 Movilidad Sostenible — Gestión de Tránsito, Transporte Público Seguro — Accesibilidad Universal

3 Infraestructura de Servicios — Cobertura Mayor, Confiabilidad, Ámbito urbano de Calidad — Aprovechar infraestructura existente, Sostenibilidad

4 Empleo y Economía — Empleos en la región, Capacitar a la población — Asociaciones Público Privadas, Sistemas Inteligentes de Control

5 Medio Ambiente — Conservación y Protección de Riqueza Natural - El Merendón — Gestión de Riesgo y Turismo Ecológico

6 Gobierno Digital — Servicios en Línea, Conveniencia para el Usuario, Datos Abiertos — Reportes Digitales, Participación Ciudadana

7 Servicios de Salud — Consultas en Línea, Atención a la medida - Grupos vulnerables — Desarrollo "Mejora tu Vida" (IDB)

8 Participación Ciudadana — Desarrollo Cívico, Participación Equitativa, Consulta Pública — Empoderamiento y Corresponsabilidad

9 Manejo de Deshechos Solidos — Manejo Sostenible Relleno Sanitario, Desechos a Energía — Ciudad Limpia, Sistema Integral de Gestión de Desechos

10 Educación — Integración generacional, Educación Adaptable — Educación Digital, Capacitación Continua

Workshop Reporting on Priorities identified by Stakeholders

PRIORIDADES TALLER CIUDAD INTELIGENTE

Ranking of Priorities

- Seguridad 26%
- Movilidad Sostenible 11%
- Infraestructura de Servicios
- Empleo y Economía 10%
- Medio Ambiente 12%
- Gobierno Digital
- Servicios de Salud 13%
- Participación Ciudadana
- Manejo de Residuos Sólidos
- Educación
- Integración de Sistemas Tecnológicos
- Calidad de Vida 7%

(Source: © IBI Group)

ACTIVITY 2: IDEAS/PROJECTS COST MONEY

INTENT:

Prioritizing projects based on the availability of municipal funds. Prioritizing Projects/Ideas

WHO ARE THE PLAYERS:

- Typically limited to Public Sector/Agency Stakeholders.
- Can be extended to select Private stakeholders such as NGO's/Developers/Business Improvement Groups.
- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Workshop/Charrette Setting. Stakeholders engage in this activity during break/downtime of a charrette.

IDEAL ENGAGEMENT SIZE:

Maximum 50-75 Stakeholders. Gathering feedback and reporting becomes time-consuming beyond this size of stakeholders.

TYPICAL TIME:

30 minutes (10 minutes to play the game and 20 minutes to discuss reporting).

DESCRIPTION:

- Multiple Boxes or jars representing Capital projects/ projects ideas are provided on a table as a part of the workshop. Short description in the form of a sentence or two of each idea/Capital projects is also written on the box/ jar.
- Cost of each project/idea is also written on the jar. Costs for projects may vary depending on the nature of projects. Cost figures are kept arbitrary but relative to each other. E.g. LRT Transit Project Value may be assigned 3$ while BRT Transit Value may be assigned 2$ while existing bus fleet upgrade may be assigned 1$ only.
- Each Stakeholder is handed mock money (say 10 coins/ paper currency/ 10$) representing limited municipal funds available to spend on capital projects.
- Each stakeholder is asked to spend the funds (say 10$) on the projects that they see fit and how they see fit.
- The amounts are tallied in each box (while other components of the workshop/charrette are in process) by the Project team.
- A member of the project team then reports back on the ranking of projects/ideas.

OTHER SUGGESTIONS:

- List of projects/ideas should not be overwhelming and represent relevant solutions for the community. Generally, this game is played well into the project process when a basic idea of the solutions/projects/ideas are known.
- The list of projects/ideas is pre-curated with the assistance of the Client prior to the workshop.
- The game can also be employed to set project goals/ priorities.

Coin Game Activity for Transportation Master Plan project, York Region, Ontario, Canada focusing on identifying project priorities
(Source: © IBI Group)

ACTIVITY 3: SPEED NETWORKING | HEAR & SHAPE YOUR STAKEHOLDER'S / YOUR ISSUE UNDER 5 MINUTES, & JOINTLY DEVISE A SOLUTION

INTENT:

Break the ice. Meet multiple Stakeholders attending a charrette in a one on one setting. Hear and share concerns jointly devise solutions for issues.

WHO ARE THE PLAYERS:

- Typically limited to Public Sector/Agency Stakeholders.
- Can be extended to select Private stakeholders such as NGO's/Developers/Business Improvement Groups.
- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Workshop/Charrette Setting. Stakeholders engage in this activity in a one on one setting.

IDEAL ENGAGEMENT SIZE:

Maximum 50-75 Stakeholders. Gathering feedback and reporting becomes time-consuming beyond this size of stakeholders.

TYPICAL TIME:

45 minutes.

DESCRIPTION:

- Rather than/in addition to each stakeholder introducing themselves at the start of the charrette, Speed networking is an ice-breaking activity between various stakeholders.
- In addition, this also ensures that charrette is dominated by a few individuals, preventing the 'softer' voices to be heard.
- This timed game is played much similar to a speed dating format, where during a seven-minute period, stakeholders have the chance to meet a fellow stakeholder/charrette attendee and exchange information on who they are, what work they do, and their key issues they face (related to the project). The intent is also to jointly devise a solution to the issues.
- After the seven-minute period, a bell will ring to signal the start of a new round. Stakeholders then move seats and begin again, for a total of say six rounds (45 minutes).

Speed Networking at Cité Internationale Universitaire de Paris, France
(Source: © Copyleft. Reproduced under Creative Commons License BY-SA 3.0)

ACTIVITY 4: ISSUES & IDEAS WALL

INTENT:

To understand the values, concerns and aspirations of the public/ stakeholders related to the specific project.

WHO ARE THE PLAYERS:

- Open to Public/ Public Sector/ Agency Stakeholders.
- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Open house Setting.

IDEAL ENGAGEMENT SIZE:

Open to public activities generates broad interest. Generally, 100 to 150 people atypically attend these.
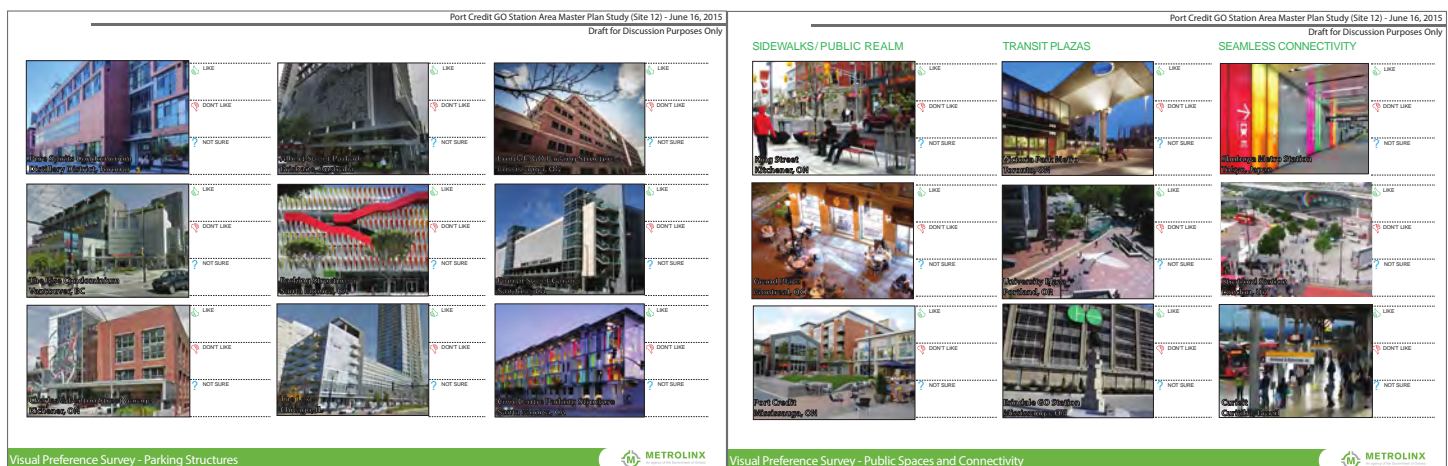
TYPICAL TIME:

45 minutes.

DESCRIPTION:

- Members of the public/stakeholders use post-it notes on the walls/boards in the room.
- The public/stakeholders can use any number of post-its to identify multiple issues and solutions.
- The input is then reported as a part of workshop documentation "what we heard" report as a part of the project.
- Reoccurring key issues/ideas are taken forward as input to the project.

Issues & Ideas Activity for Green Line Transit-Oriented Development planning project, Calgary, Canada
(Source: © IBI Group)

ACTIVITY 5: PREFERENCE BOARDS

INTENT:

An interactive preference selection exercise of the different concepts for key sectors within the station area using precedent images.

WHO ARE THE PLAYERS:

- Open to Public/ Public Sector/Agency Stakeholders.
- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Open house Setting. Public/Stakeholders engage in this activity during break/downtime of the charrette.

IDEAL ENGAGEMENT SIZE:

Open to public activities generates broad interest. Generally, 100 to 150 people atypically attend these.

TYPICAL TIME:

30 minutes.

DESCRIPTION:

- Members of the public/stakeholders use red (not preferred)/green (highly-preferred)/yellow (somewhat preferred) dot stickers on boards with precedent images grouped under various categories.
- Categories could range from types of open spaces, furniture preferences, types of streetscape treatments, building facades, types of parking solutions etc.
- Highly preferred precedent images then set the tone for Station Area Concepts/Plans and are used as preferred precedent images to explain ideas for the project.
- The boards with stickers are included as a part of workshop documentation "what we heard" report as a part of the project.

OTHER SUGGESTIONS:

- This game is played well into the project process when a basic idea of the solutions/projects/ideas is known.
- The precedent images are pre-curated with the assistance of the Client prior to the workshop.
- The game can also be employed to set project goals/priorities.

Visual Preference Survey, Port Credit TOD Study, Ontario
(Source: © IBI Group)

ACTIVITY 6: TOD INTERACTIVE BOARD-GAME

INTENT:

Use Lego/Foam boards to develop a concept for the Station Area/TOD.

WHO ARE THE PLAYERS:

- Typically limited to Public Sector/Agency Stakeholders.

- Can be extended to select Private stakeholders such as NGO's/Developers/Business Improvement Groups.

- Mayors and political decision-making stakeholders often participate in developing countries.

FORMAT:

Workshop/Charrette Setting. Stakeholders engage in this activity in a one on one setting.

IDEAL ENGAGEMENT SIZE:

Maximum 50-75 Stakeholders. Gathering feedback and reporting becomes time-consuming beyond this size of stakeholders.

TYPICAL TIME:

90 minutes.

DESCRIPTION:

- One potential risk of a charrette is that the process is dominated by a few individuals, preventing the 'softer' voices to be heard. To overcome this constraint, the exercises of each of the charrette rounds were designed so that this was minimized.

- The board game uses pieces of foamboard representing land uses over a base map to overcome the effect of one individual taking over the verbal conversation and the effect of only the people who can draw being able to contribute to the design ideas.

- Stakeholders are divided into groups of 8 - 10 ensuring that all disciplines are represented at each table and are provided with the foam board and the base maps as building blocks of the concepts.

- Station Area concepts developed are then presented at the end by each group to the rest of the audience.

- These concepts become the basis for preliminary concepts that are refined and presented back to the community.

TOD Interactive Board Game Activity for Green Line Transit-Oriented Development planning project, Calgary, Canada

(Source: © IBI Group)

LEGO AND LEGO-BASED INTERACTIVE BOARD GAMES

Lego sets, a set of interlocking plastic blocks, are a staple of children's toys around the world. They are extremely minimal, flexible, and non-sequential, allowing them to represent the shape or form as desired by its user. They have been found to be effective tools to encourage creative thinking, freeform expression, and logical problem-solving. The blocks are found in vivid ranges of primary colors, with a range of function-specific symbolic blocks (street lamps, a patch of lawn, etc.) and extensions. While they have been primarily used to help children build shapes and forms (established and freeform), they have also been adapted to foster creativity through product lines such as Lego Mindstorms (with hardware and software to create programmable units). Increasingly, these qualities have been sought by planners and architects, as well. CTS-EMBARQ Mexico has developed a DOTS Kit to use these qualities, in conjunction with its TOD manuals, in capacity building. More broadly, the Massachusetts Institute of Technology (MIT) and its partners are exploring how Legos can be used to create a collaborative planning platform. Planning processes, set up to

bring in an active participation from its various stakeholders, benefit from bringing in Lego blocks to the table. Blocks are indicative, and might not provide representative models built to scale. However, visualized spaces (buildings or neighborhoods) might initiate conversations among stakeholders. In a participatory planning activity, this outcome is desired. As Lego blocks are small and adaptable, they allow for a number of people to use them at once. This feature makes them useful to designers of a participatory planning activity. They also allow planners to immediately test their many proposals real time in space and gauge stakeholder reactions to them. Such simple scenario visualizations tools can be used to simulate design problems pertaining to several aspects of creating a TOD neighborhood such as the makeup of a street with respect to pedestrians or vendors, built-up area around a transit node, access to transit nodes and other services, or use patterns of a neighborhood.

Lego-based Workshop - Fantasize your City
(Source: © Lamiot. Reproduced under Creative Commons Attribution 4.0 International license BY 4.0)

ACTIVITY 7: ROAD SAFETY WORKSHOPS

INTENT:

To sensitize participants about road safety challenges faced by the vulnerable road users, and create awareness on both the risk factors as well as the solutions, covering infrastructure, traffic management and urban planning.

WHO ARE THE PLAYERS:

- Typically limited to Public Sector/Agency Stakeholders
- Can be extended to select Private stakeholders such as NGO's/Developers/Business Improvement Groups/Community members

FORMAT:

Workshop/ Charrette Setting. Stakeholders participate in random groups of 6 to 8 people.

IDEAL ENGAGEMENT SIZE:

Maximum 40-60 Stakeholders.

TYPICAL TIME:

4-5 hours (including site visit).

Road Safety Training under the "Mobilize Your City" program with Nagpur Smart & Sustainable City Development Corporation Ltd. and UMTC in India (17th February 2020)
(Source: © WRI India)

DESCRIPTION:

- Select a busy street or intersection within the TOD area. It is important that this location has a variety of road users and a complex set of road safety challenges
- Randomly divide participants into groups of 6-8 individuals and visit the area selected
- The participants make an inventory of all the street elements and make a note of inadequate infrastructure from the perspective of pedestrians and non-motorized transport users, that they feel is missing or under-provided
- The participants are also asked to observe road user behavior and identify potential conflict points and situations
- Participants return to the workshop hall and discuss their findings. Each group is asked to list down their observations on road safety conflicts and discuss solutions to mitigate these risks
- Participants then draw out their solutions on a large base drawing outline of the street/intersection in question
- Each team then presents their solutions to the larger audience. Commonalities and variations across the groups are noted down

LIMITATIONS

- The experience of participants may vary depending on the time and day of the site visit. For example, challenges observed during peak hours on a weekday will be different from off-peak hours or a weekend. Similarly, activities on the street will also be different during daytime and night time. However, depending on the target audiences and considering it is predominantly a capacity building exercise the workshops, the visits will most likely happen during a typical weekday working hours. The site visits usually take 1-2 hours and is supported by information collected in a pre-workshop visit done by moderator/ presenter.
- Detailed multi-scenario visits and robust data collection should be conducted by the implementation agency prior to the design development phase for actual implementation.

Road Safety Training under the "Mobilize Your City" program with Ahmedabad Municipal Corporation and UMTC in India (12th February 2020)
(Source: © WRI India)

OTHER VIRTUAL GAMES

Virtual techniques increasingly are being applied both in traditional and lifelong learning environments. Using virtual gameplay allows participants to explore new ideas and solutions in different situations. These video-based city planning games can be general, like SimCity—considered the first video game in this area—or explore a specific aspect, such as the Lincoln Institute's Exploring Density. This section gathers some of these games and explores how they can be used in capacity-building and the exploration of the application of TOD concepts.

MIT CITY SCOPE
http://cp.media.mit.edu/city-simulation

MIT City Scope defines its scope of work as developing "... augmented reality decision support systems (ARDSS) that facilitate non-expert stakeholder collaboration within complex urban environments." They have been able to create a range of decision-making tools used to simulate, prototype, and abstract real-time data, spatial data, and user feedback to provide observable results for alternative scenarios of design problems. Their approach uses a combination of data visualization, analysis, and scenario building to inform stakeholders' possible consequences of their particular decisions. An example of the decision-making potential of such simulation models can be found below. The larger goal of such an exercise was to make the planning process less "technocratic," and introduce an element of participation, and "co-creation." Researchers at MIT, in collaboration with the Barr Foundation, created a model replica of Dudley Square, a neighborhood in the greater Boston area, with Lego blocks. The blocks were used to build the physical components of the neighborhood as well as to represent its inhabitants. It was created to understand the impacts of introducing bus rapid transit (BRT) services in the area. It was accompanied by a Lego-built 3-D model of a Boston street, and a touchscreen interface to present the possible impacts of specific planning decisions made by stakeholders. These simulations, in the form of an exhibition, were open to the public. The touchscreen interface offered various parameters, such as access to transit routes, cost of provision, access to jobs in the city, or the mode of public transit. These parameters were gathered together from publicly available data. By changing a specific parameter, any user could understand how those decisions could impact their specific commuting routes and habits for any given location. They were also able to influence the quality of the service by interacting with specific Lego blocks representing bus stops for said services and observe the impacts to the cost and quality of the service provided to them.

CITY GAME

http://fieldsofview.in/projects/city-game/

In planning environments where data is not readily available, it becomes difficult to use simulation models to initiate a conversation about broader planning policies or their consequences. In such conditions, it is crucial to devise a method to simulate a proximate representation of scenarios under consideration. The city game, originally developed by Dr. Juval Portugali of Tel Aviv University, was later adapted at the Next Generation Infrastructure Laboratory in Bangalore. It was designed to explore urban form and gather either an individual's or a community of people's response to design decisions and preferences for the direction of the city's growth. This active

game asks its participants to take turns and provide the city with a service/amenity, often as a reaction to another player's decision. This game, while simple and devoid of complex analytical prowess, introduces an element of interactivity and dynamic growth that is often found missing in orthodox means of participatory planning methods. The game provides different frameworks to teams to create their realities of preferred development alternatives. The game also accommodates the introduction of policies and development regulations, and help organizers observe and compare the effects of such policies on different development patterns.

Similarly, there are many games that help stakeholders visualize and consider the trade-offs between different elements of TOD. Some of these are recommended here:

URBAN LAND INSTITUTE'S URBAN PLAN BUILDING BLOCKS: A DENSITY GAME

Source: www.lincolninst.edu/subcenters/visualizing-density/blockgame/index.aspx

EXTREME EVENT GAME

Source: https://toolkit.climate.gov/tool/extreme-event-game

WHAT IS ZONING?

Source: http://welcometocup.org/Store?product_id=62

WHAT IS AFFORDABLE HOUSING?

Source: http://welcometocup.org/Store?product_id=20

MINI METRO

Source: http://dinopoloclub.com/minimetro/

NEW TECHNOLOGIES IN THE OUTREACH PROCESS

In addition to traditional methods of outreach, including workshops, community meetings, and hearings, utilizing emerging and digital technologies, such as mobile apps, virtual open-houses, live chat sessions, and community comment forums should be strongly considered in your project engagement strategy. Technological methods can help to extend the reach of the transit-oriented engagement, connecting with people that are traditionally overlooked in the consultation process, for reasons varying from an inability to attend public meetings to being uncomfortable providing their opinion in large engagement sessions. Online and virtual mediums of outreach allow for information to be disseminated more broadly and ultimately improves the reach of public information and consultation opportunities. This section contains references to applications and websites that serve as examples of the many technology-based engagement mediums available today. A variety of examples are included to provide the ability to explore the many engagement options currently available and find an option that best suits your community and consultation strategy.

Browsing websites like **NextDoor (https://nextdoor.com/)**, allow neighbors to connect and share ideas, monitoring the satisfaction around transit project areas. Websites like **Neighborly (https://neighborly.com) and Citizen Investor (http://www.citizinvestor.com),** simplify the often daunting task of budgeting and investing for transit-oriented projects and provide citizens with the opportunity to have a say in financial choices. Some of these engagement options consult with constituencies during the decision-making process, while others gauge the overall values of the community related to budgeting and apply those priorities afterward. Several map-based tools make it possible for people to leave comments on a map, for example, **CrowdMap (https://crowdmap.com/welcome) or Community Remarks (http://www.communityremarks.com).** The mapping component of these platforms is especially useful for a transit area-level planning project to provide citizens with a visual understanding of TOD-related changes. Applications like T**extizen (https://www.textizen.com)** allow you to send, receive, and analyze citizen questions through SMS text messages. Moreover, web-oriented platforms like **Crowdbrite (http://www.crowdbrite.com, Neighborland (https:// neighborland.com), and MindMixer (http://app.mysidewalk. com)** help your community craft websites and portals for community engagement, including online surveys, forums and feedback, while also providing detailed project information in one online location. **Poll Everywhere (https://www. polleverywhere.com)**, allows you to create polls on mobile devices that encourage citizens to engage as they experience transit-oriented development firsthand (while riding transit, for example).