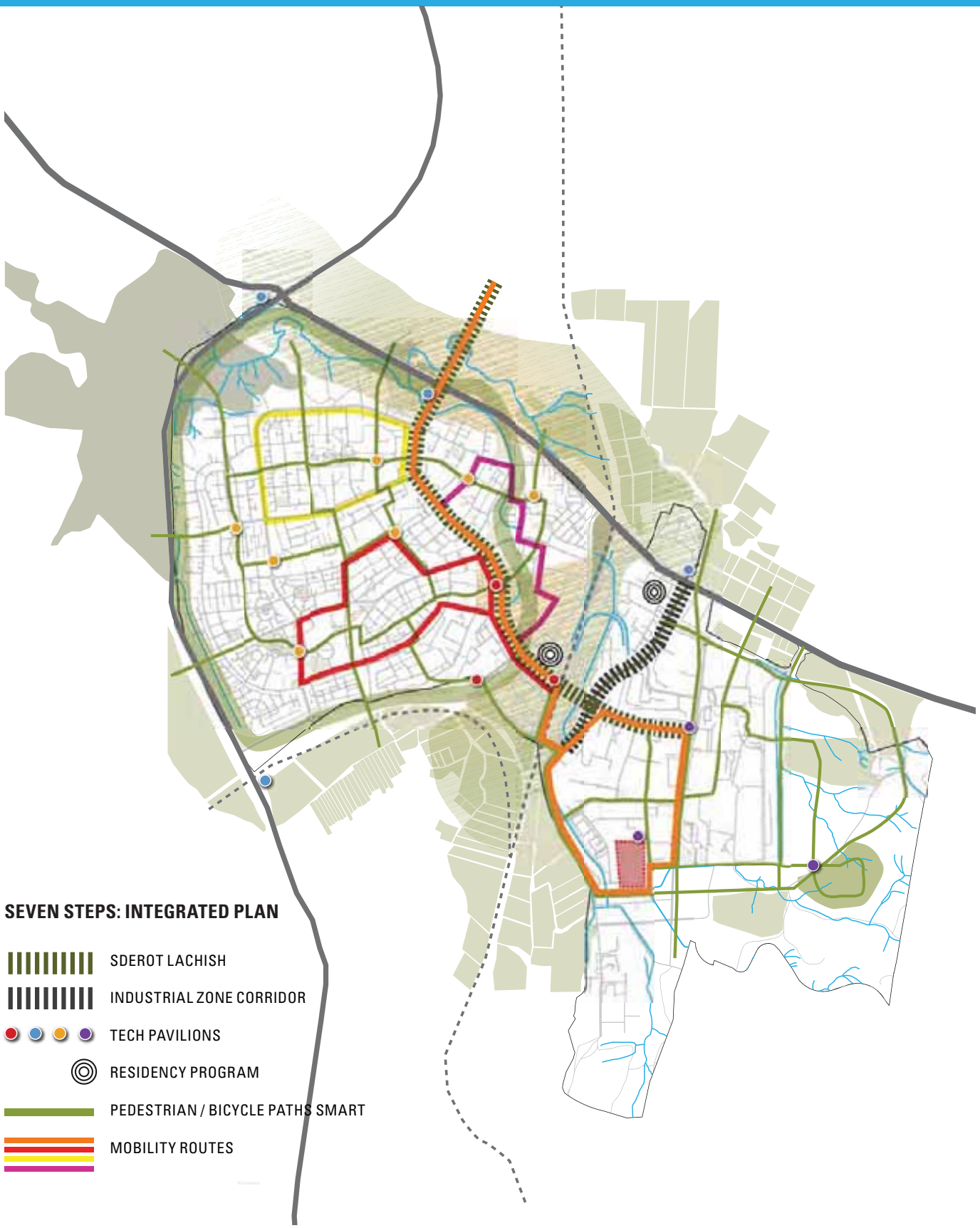
INTRODUCTION

As part of the strategic plan envisioned for Kiryat Gat, seven steps are suggested for immediate implementation: a smart mobility transportation system, a network of tech pavilions, an integrated urban design language for Sderot Lachish, a residency program for artists and start-up companies, impovements along a north-south corridor in the industrial area, a parking lots design competition, and a material flow analysis. Each one of the components is significant on its own; however the plan's strength lies in their integration, as the seven steps are inter-related and are all derived from the strategic plan.

The seven steps will assist in branding Kiryat Gat as a technology-oriented city and as Israel's first smart city. They have the power to generate long-term processes and to create an infrastructure of collaboration between the municipality, the private sector, and the community. Furthermore, all seven steps have strong visibility in the urban and national scales as contemporary models for urban planning.

A TECHNOLOGY-ORIENTED CITY


SEVEN STEPS: INTEGRATED PLAN
SDEROT LACHISH
INDUSTRIAL ZONE CORRIDOR
TECH PAVILIONS
RESIDENCY PROGRAM
PEDESTRIAN / BICYCLE PATHS SMART
MOBILITY ROUTES

1 Tech Pavilions

A network of tech pavilions is a strategic approach for promoting technological interfaces in public spaces. Its goals are: strengthening local identity and enhancing the connection between residents and their living environment; Providing accessibility to advanced technologies and incorporating them into public spaces; Encouraging social mobility by providing education for different age-groups; Developing public spaces using climate-sensitive urban language; Using compact interventions for stitching the urban fabric.

Four types of tech pavilions will be located in relation to the city's overall network (community pavilions, urban pavilions, info pavilions and industrial pavilions). The specific program and content of each pavilion will be determined according to its location in a specific community or area, but all of them will include computer stations, free Wi-Fi, screens, information, sitting areas, natural or artificial shading, bike racks and repair stations etc.

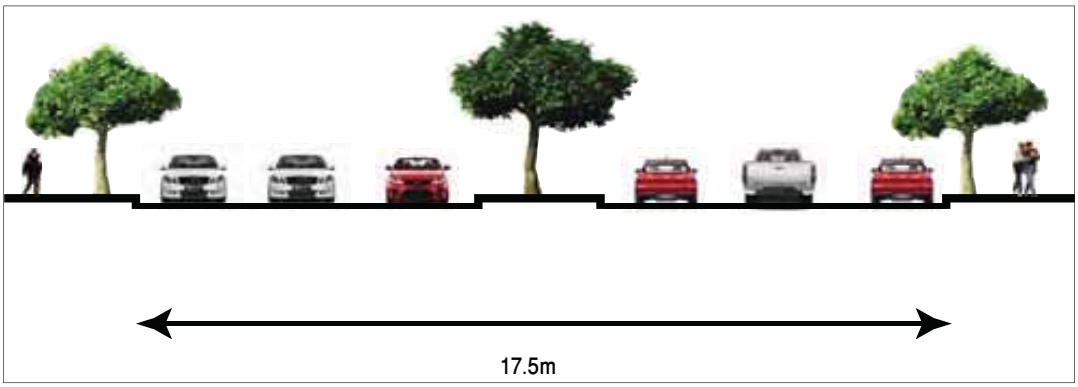
The pavilions are not developed as independent nodes but as an integral part of their surroundings, reinforcing public spaces, acting as catalysts and creating a ripple effect in their environments. The pavilions and their adjacent public spaces are planned according to climate-sensitive design, regarding issues such as materials, local vegetation, water management and shading.

TECH PAVILION RENDERING

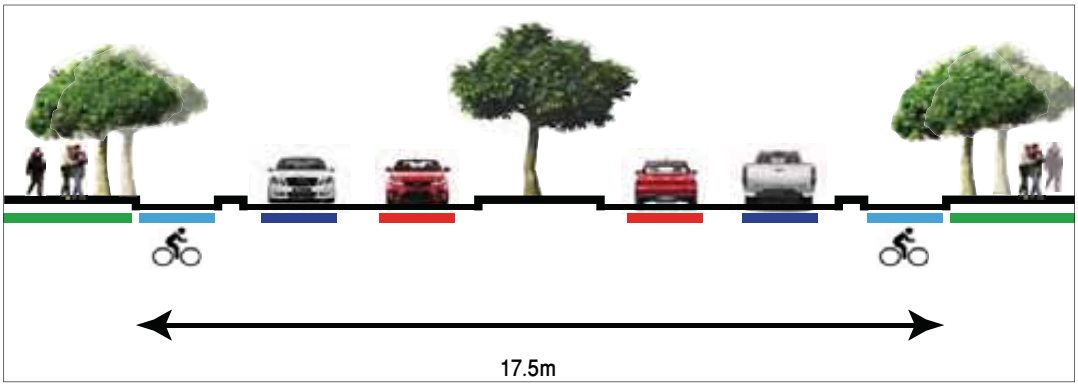
2 Sderot Lachish

Developing an integrated urban language for Sderot Lachish, Kiryat Gat's main axis, is a crucial step in transforming this fragmented, exposed street into a vital and continuous linear connection between the different parts of the city, including the the industrial area and northern development. Furthermore, Sderot Lachish can present a new image to those entering the city, either by car or train.

The urban language for Sderot Lachish is based on two main themes: climate and technology. As of today, major parts of the street are not shaded and therefore uncomfortable for walking. Planting mature trees along the street will not only enhance the human comfort but also create visual unity and a cohesive urban element. The second theme, technology, will be incorporated into urban space as smart street furniture, solar panels, interactive maps, real-time information and signage. The proposed street section puts emphasize on pedestrian and bicycle traffic (and not only vehicular traffic), omitting traffic/parking lanes, widening the sidewalks and adding a bicycle path on each side.



TYPICAL SECTION: EXISTING CONDITION



TYPICAL SECTION: PROPOSED PLAN

3 Smart Mobility

Being a medium size city, only three kilometers wide, mobility system for Kiryat Gat should be based on suitable tools, utilizing its compactness and not reproducing tools employed in major metropolitan areas. Adjusting the mobility system to the city's compact scale will not only increase its efficiency and answer local needs, but also prevent unnecessary waste of recourses and carbon emissions.

In order to advance the idea of smart mobility for compact cities and to render the current system more efficient, we propose changing the existing transportation model into a system of high frequency shuttles. The shuttles will have relatively short routes, and will provide a good connection to the train station (in conjuncture with the train schedule) and industrial zones. This system is based on the premise, that small and fast shuttles are much more suitable for medium size city and more convenient to use, in comparison to larger and slower buses.

Furthermore, the system can incorporate a model of "mobility on demand", as part of which, users can order a shuttle through touch screens in the stations themselves or through a website or an app. Through these mediums, the passengers can also get real-time information regarding the shuttles' time of arrival and routes. It is the first time that a "mobility on demand" model is planned in Israel and it is considered innovative also in an international context. Applying such a model in Kiryat Gat will not only help branding the city as cutting edge but also serve as a model for adjusting the transportation system to compact scale.

EYE STOP

Credit: MIT SENSEable City Lab

4 Residency Program

In order to establish collaboration between different actors and stakeholders, as well as to introduce the city to new and varied population groups, we propose developing a residency program in Kiryat Gat. The program includes two sub-trajectories: the first is designated for start-up companies which seek to develop a unique product or idea, in different areas of expertise. The second trajectory is designated for young artists who use different types of technologies in their work.

As part of the program, the participants will use hangers and work spaces in Kiryat Gat's industrial area, which will retrofitted and renovated for this purpose. They will also receive partial rent support for housing in Kiryat Gat and will be able to use services available from established companies placed in Kiryat Gat's industrial area (such as conference rooms for start-up companies or left-over materials for artists). In return, the participants will be obligated to participate in the city's education and community system, as teachers, mentors or instructors, as well as to open their studios/work spaces for tours and exhibitions.

The public spaces adjacent to the work spaces will be developed as to include open-air exhibitions and gathering areas, transforming the residency area into a major urban and regional attraction point and re-branding Kiryat Gat as a center for technological and artistic innovation.

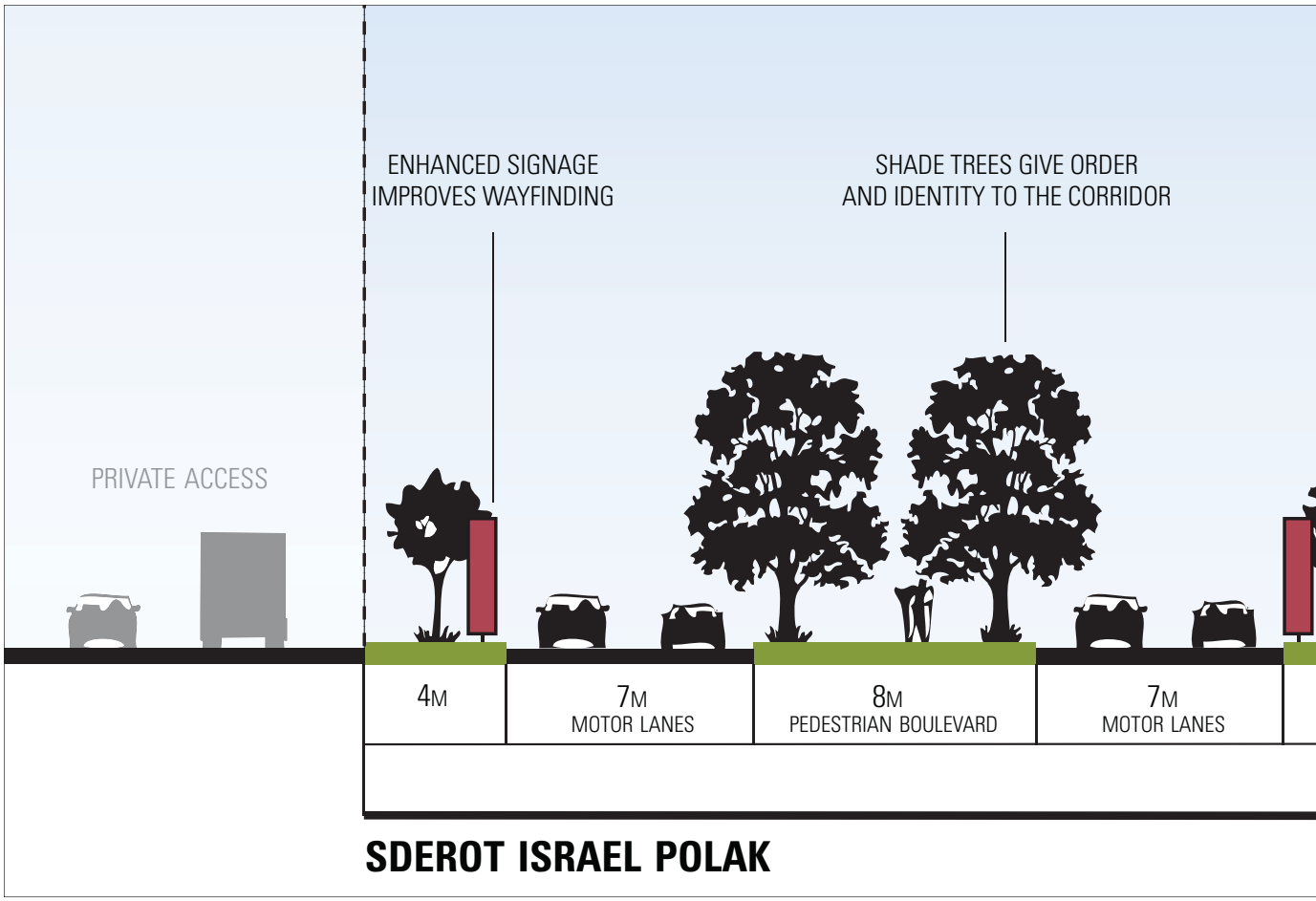
RECOMMENDED SITE

5 Industrial Zone Corridor

Sderot Israel Polak is the key gateway for the Kiryat Gat industrial zone. As such, it has a critical role in the movement of people and goods. At present, the entrance to the park does not function as a clear gateway and the roads have no clear order or hierarchy. The businesses in the park are also situated in an unorganized manner and there are no key nodes or destinations in the zone, other than the individual businesses. The industrial park needs focus and directional hierarchy in order to provide a good first impression of the area and the city of Kiryat Gat.

An information gateway will serve as a welcoming location where visitors to the industrial park can pause in a small plaza to learn about the area they are visiting. Informational boards will provide standard directional information, such as the location of the pavilion, amenities, services, and sites of interest. The boards would also provide a holistic overview of the activities in the park, fulfilling the need for general orientation.

A suite of streetscape improvements along Sderot Israel Polak would provide a positive first impression of the area and a clear sense of place. New tree plantings, for instance, will create a strong visual presence to reinforce the importance of the street. In addition, a street allowance provides enough space where a new continuous cycling facility can be provided along the boulevard, which has a direct connecitno to the city. A street hierarchy could also be created in the industrial area to limit large truck movements along the corridor when possible. The improvements will enforce the road's primary role to serve the movement of goods and people to and from the industrial park



6 My Backyard: Parking Lots Design Competition

All firms in the industrial park can reconsider the physical quality of their parking lots for employees and visitors. This design competition will allow for all businesses to look in their own backyard and consider how they can make improvements to their sites. A collective result of improving the parking conditions will assist in better integrating individual industrial sites to the broader district. This initiative would be the first of its kind in Israel and has the potential to receive positive media attention for participating businesses and the city of Kiryat Gat.

Parking lots represent up to 40% of urban land, and this is typically on publicly accessible privately owned land. Parking has a major impact on the physical environment; this impact, however, can become a positive one for the Kiryat Gat industrial area. Redesigning parking lots can reduce the urban heat island effect – asphalt surfaces can be 20 degrees hotter on sunny days – by using shading and vegetation to make parking lots cooler and more comfortable. Ecologically sensitive design, such as pervious pavements, can capture storm water and reduce runoff. Well-designed parking lots can also provide for multiple uses, including food vendors, play areas, and event spaces.

The city will advertise the competition to local businesses and industries, explaining how the competition is a step towards sustainability and rebranding the industrial park as a positive place to do business. Sharing best practices, gathering ideas from participants, and using local resources will be key in implementing improvements in each company's parking lot. The city will also facilitate ongoing improvements by scheduling an annual series of programs to recognize and celebrate the efforts.

THE KIRYAT GAT INDUSTRIAL AREA HAS A WIDE VARIETY OF PARKING AVAILABILITY. THE SIZE AND SCALE OF THE PARKING VARIES, BUT THE TYPOLOGY OF THE PARKING SPACES IS USUALLY THE SAME: AN ASPHALT AREA WITH NO OTHER AMENITIES.

7 Material Flow Analysis

Kiryat Gat has an opportunity to implement the first eco-industrial park in Israel, whereby the outputs from one industry are used as the inputs for another. Cities that have embraced the eco-industrial model, including Kalundborg, Denmark, have seen economic, environmental, and social returns on investment. The first step towards achieving a balance in the flow of materials and energy is to understand those flows. A comprehensive inventory must be undertaken in order to account for the quantity, quality, and frequency of each firm's inputs and outputs.

This initiative is achievable, but it will require a great deal of trust and cooperation. It should be noted that municipal government can play a supporting role, in terms of providing incentives, but nearly all successful eco-industrial parks have been private initiatives, driven by economic feasibility and common environmental goals. Cooperation is important because Kiryat Gat's industries are quite varied, and achieving a balance of material flows will require experts familiar with each one. It is incumbent upon facilitators to be inclusive, listen carefully to feedback, and make connections between compatible industries. The material flow analysis is an iterative process, and is the starting point for future collaborations.