



# Montréal's Industrial Projects

Bureau  
du design

Handbooks of Best Practices  
for Design and Architecture  
Quality

Handbook 2 – Taking Action!  
Montréal's Industrial Areas in  
Transition





# The Handbooks

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Handbook 1 – 84 Best Practices to Inspire Action

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Handbook 2 – Taking Action! Montréal's Industrial Areas in Transition

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Handbook 3 – 35 Exemplary Projects Illustrating Best Practices

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# Montréal's Industrial Areas, Today and Tomorrow



## Montréal's industrial typology

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It is important to begin by establishing a common basis for better understanding Montréal's industrial typology. To that end, the Handbook proposes a classification of the various types of industrial siting contexts.

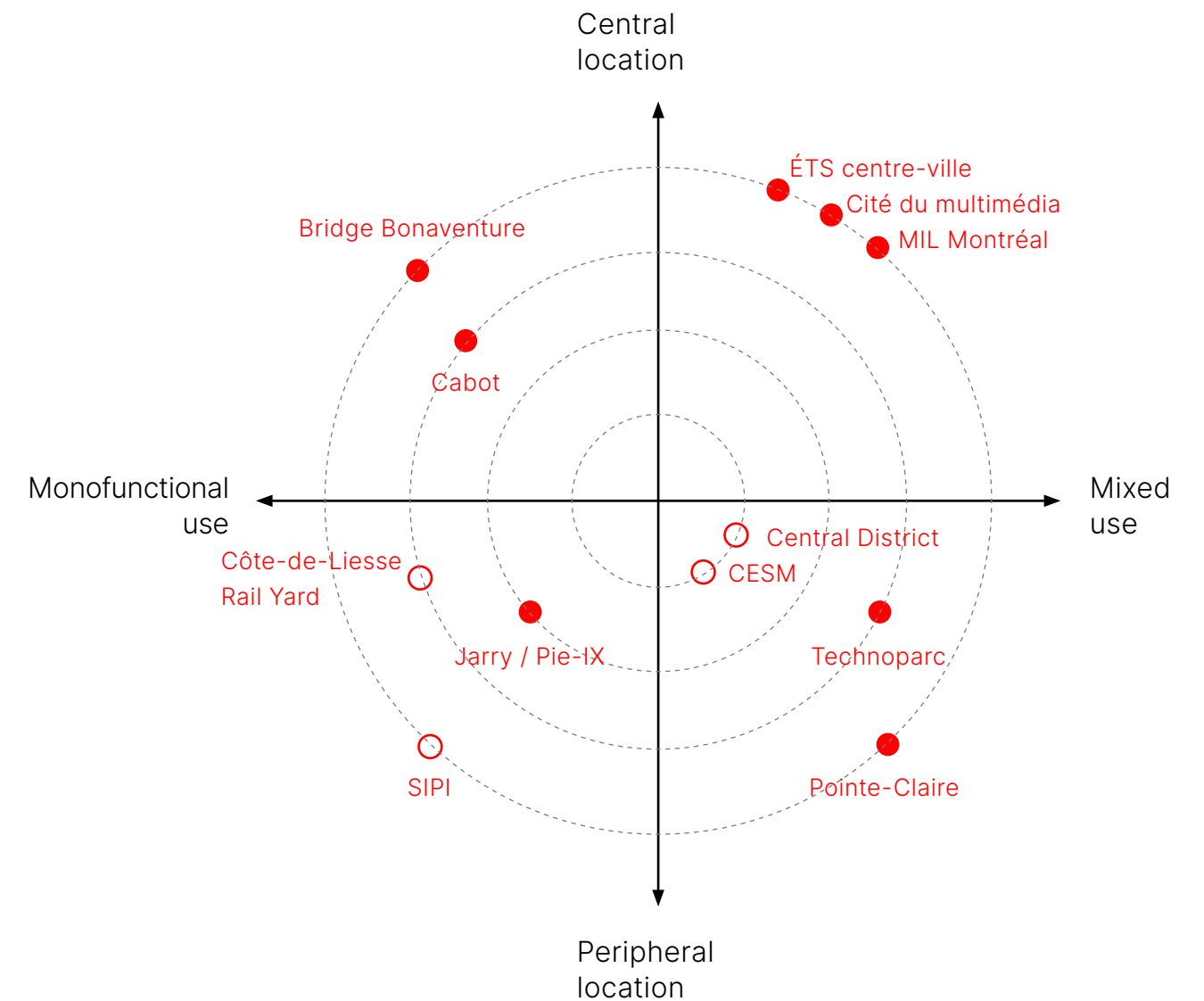
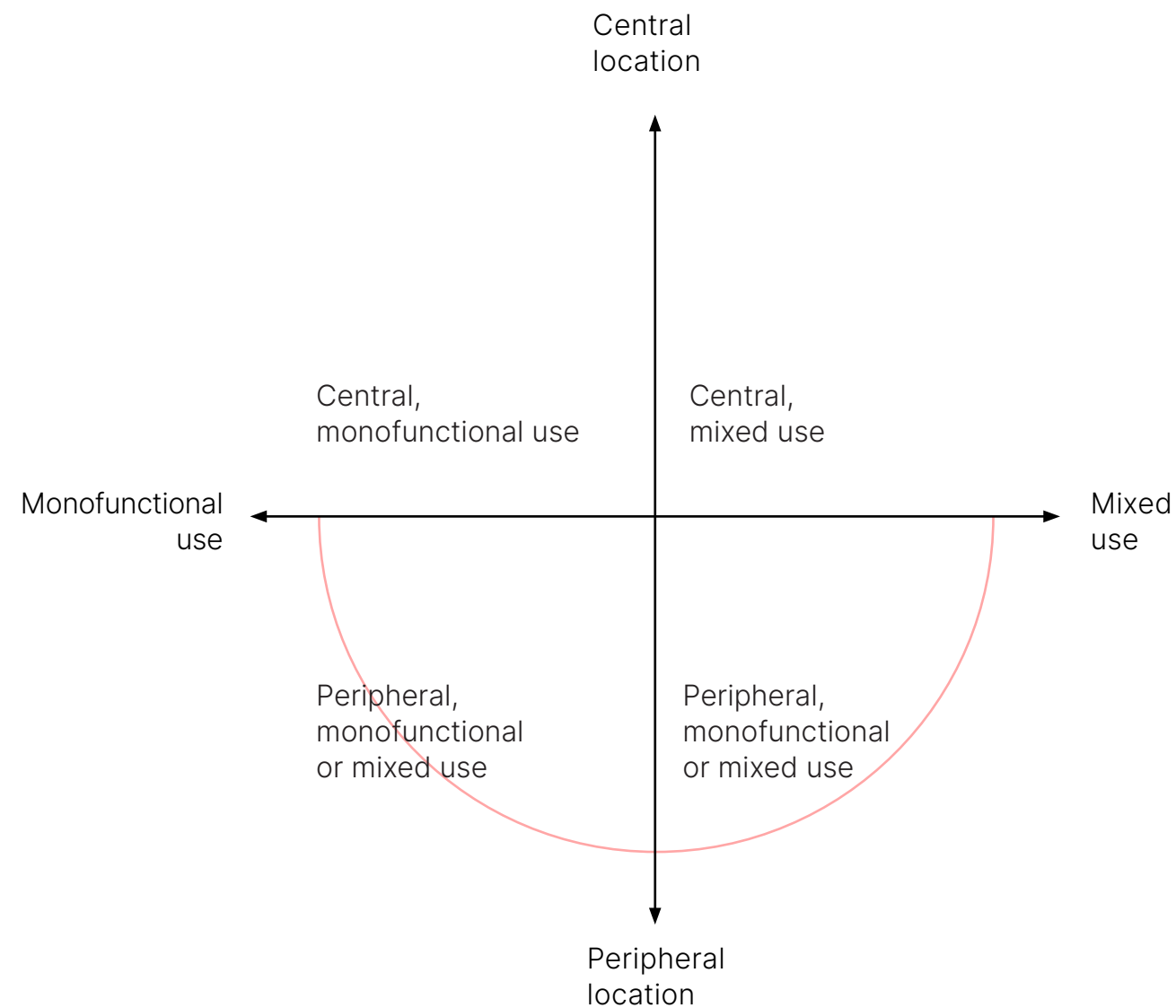
This classification uses two principal factors: **the location and primary use of the land area where the project is to be implemented**. Locations range from central to peripheral, and uses, from monofunctional to mixed. Monofunctional refers to land areas with a purely industrial purpose, while mixed refers to land areas with multiple uses (e.g., in and on the outskirts of downtown and the residential neighbourhoods) where light-industry activity is permitted.

The siting of an industrial project will differ according to whether it is located in a central, mixed-use area or in a peripheral area (e.g., a data farm downtown or an industrial park at one tip of the island). Contextual specifics (e.g., lot size, neighbourhood adjacency, transportation connections, presence of biodiversity) will inform the project planning and design approaches. Quality in design and architecture will thus be directly influenced by these distinctive urban and landscape characteristics (e.g., strategies for siting and volumes, façade treatment, screening and impact mitigation).

*Voir les schémas de la page suivante pour la description des quatre principaux types industriels montréalais.*

# The four main types of industrial sites

Some examples that represent the 4 types.



- Type 01: Central, monofunctional use

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- Type 02: Central, mixed use

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- Type 03: Peripheral, monofunctional or mixed use

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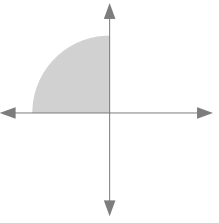
- Type 04: Peripheral, extensive monofunctional or mixed use

- Area with non-extensive use
- Area with extensive use

The research revealed that in peripheral areas, the constraints and opportunities are similar, regardless of land use. So-called extensive uses in peripheral contexts, however, pose particular challenges, and this type will therefore be treated independently.



# Type 01: Central, monofunctional use



## Description

This type is characterized by older industries, sometimes obsolete or repurposed, and others that remain active after several decades (e.g., Lantic Sugar, Fleischmann, Robin Hood).

The industrial architectural features are symbolic of Montréal's history, and there are many heritage buildings and facilities (e.g., silos, hoisting equipment, stone or red-brick buildings).

These land areas originally spread out in the vicinity of historical industrial infrastructure such as waterways and rail lines (e.g., Port of Montréal, Lachine Canal) and led to the construction and spread of adjacent working-class neighbourhoods (e.g., the former faubourgs).

This proximity to and visibility of heritage industrial sites from downtown or the entry points to the city are perceived as markers of Montréal's identity.

Some of these Montréal land areas offer significant potential for conversion, reallocation and densification. Others have been identified as containing unique historical features that should be preserved (e.g., Five Roses).

Several transformations and preservation initiatives are currently being planned or implemented.

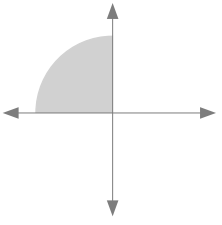
## Today

This type presents substantial challenges of renewal resulting from the disuse of the built environment and of the private or public infrastructures serving the sites (e.g., access roads, equipment, engineering structures). Some intensive industrial operations, though emblematic of a rich, identity-shaping heritage, have left a legacy of severely contaminated soils. As they are often close to or integrated into historically working-class neighbourhoods, these sectors also present a number of co-existence challenges in terms of mitigating nuisances and making active routes more welcoming and safer.

## Tomorrow

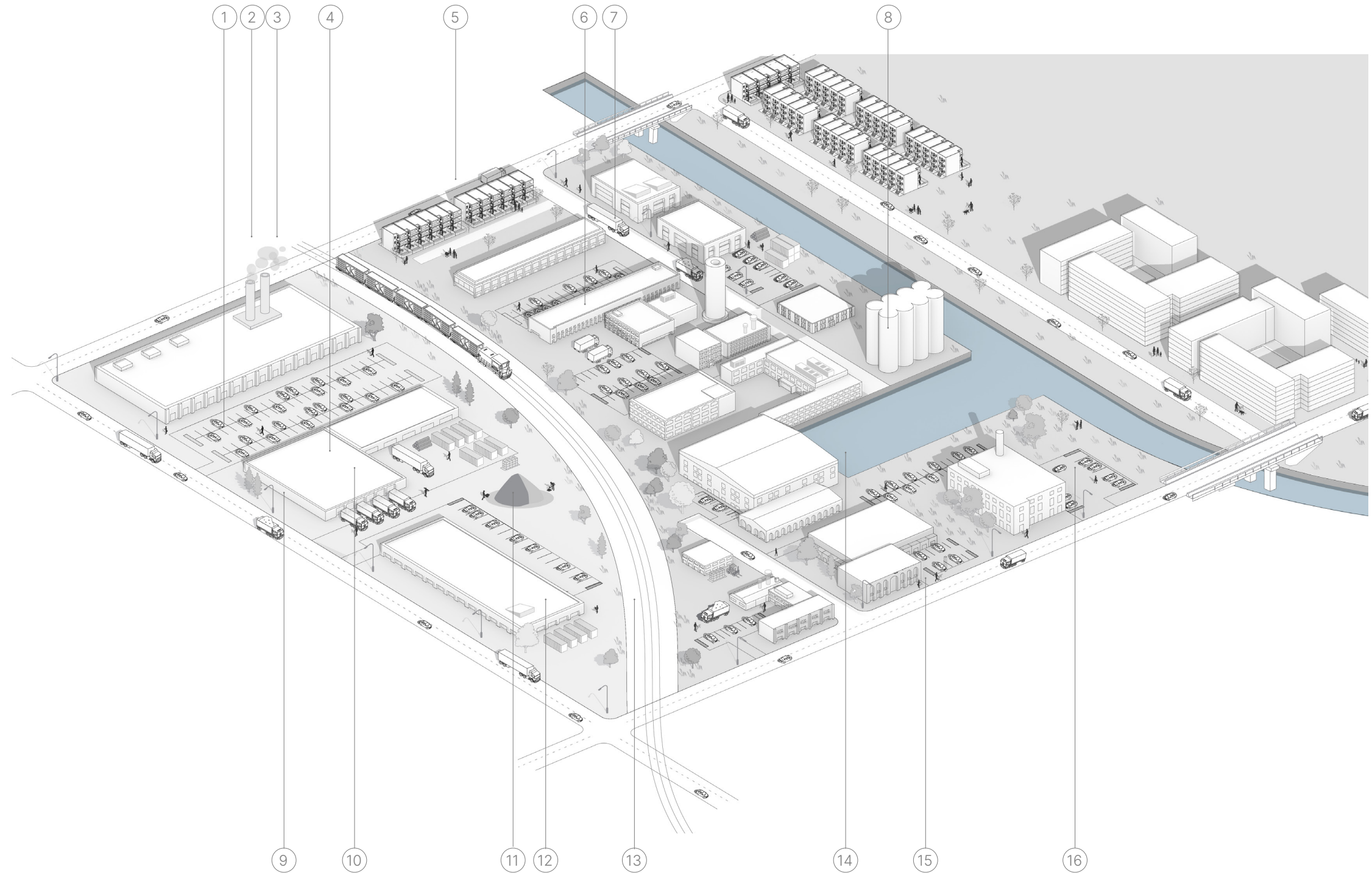
Strategically located and embodying a significant industrial heritage, this type of area offers opportunities for land and landscape enhancement, densification and increased mixed uses, for example through careful treatment of interfaces and active routes, as well as adaptation of the built environment with regard to current environmental and social challenges.

# The central, monofunctional use type today



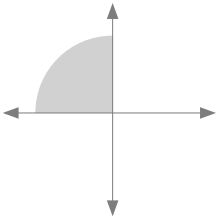
## Observations

- 1 Extensive hardscaped surfaces used for outdoor parking
- 2 Energy-intensive manufacturing operations
- 3 Poor air quality associated with industrial operations
- 4 Predominance of manufacturing buildings with imposing volumes and sizes that make their requalification more complex
- 5 Proximity of residential uses
- 6 Diversity of the built environment and monofunctionality of uses
- 7 Urban environment presenting challenges in terms of safety and co-existence with users
- 8 Obsolete or vacant remnants of the industrial past with untapped heritage presentation potential
- 9 Blind or low-permeability façades (materiality, rhythm, openings)
- 10 Large buildings with substantial footprints and generic architecture (low-rise, monolithic)
- 11 Soils contaminated or used for storage of materials
- 12 Use of toxic or polluting materials
- 13 Physical barriers and enclosure of the area
- 14 Inaccessible shorelines and unexploited water views
- 15 Poor implementation of setbacks
- 16 Underutilized and vacant lots



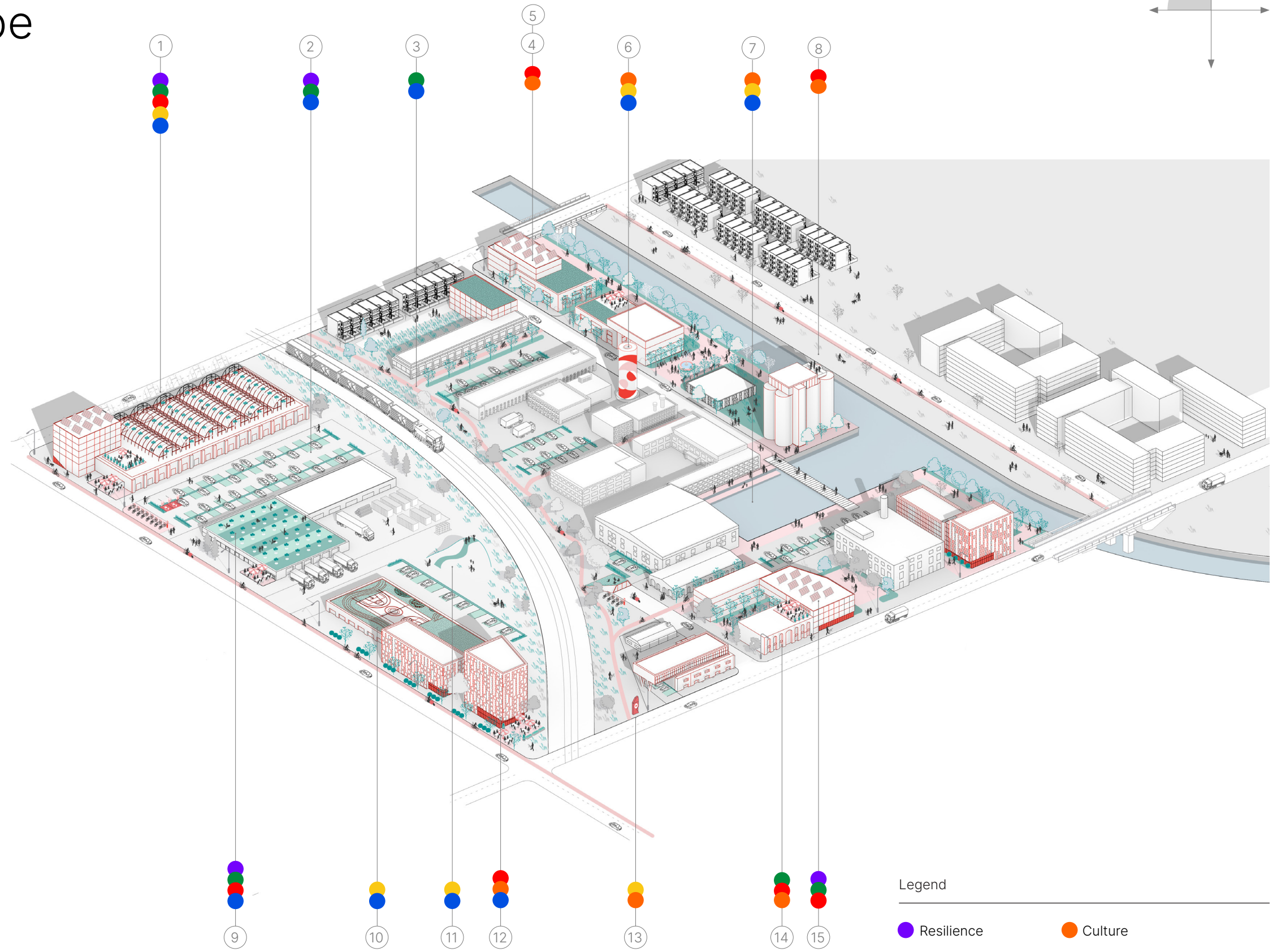


# The central, monofunctional use type tomorrow



## Opportunities

- 1 Exploitation of the fifth façade (rooftops) of buildings (e.g., greening, solar panels, community spaces, urban greenhouses)
- 2 Greening of parking lots and creation of sustainable mobility hubs (e.g., charging stations, car sharing, bike sharing)
- 3 Establishing new permeability of city blocks to enhance active routes
- 4 Requalification of existing buildings, densification of city blocks and alignment of the built environment with the public domain
- 5 Mixed uses and incorporation of new uses
- 6 Enhancement of buildings with architectural and heritage qualities through art projects
- 7 Democratization of shoreline accesses
- 8 Affirmation of the site's identity through creation of urban and landscape viewpoints and landmarks
- 9 Greening of rooftops to reduce the heat island effect, realize energy efficiency gains and introduce market gardening
- 10 Development of spaces that can be appropriated by members of the community (sports fields/courts, terrasses)
- 11 Creation of meeting and gathering points (e.g., lookouts) to foster citizen engagement with residual or transitional spaces
- 12 Opening and activation of the ground floor onto the public domain
- 13 Lighting plan, wayfinding/signage and urban art
- 14 Preservation and enhancement of the site's heritage and memory through conservation or adaptation of buildings and equipment to new uses
- 15 Production/sharing of renewable energy (e.g., solar panels, district heating network)



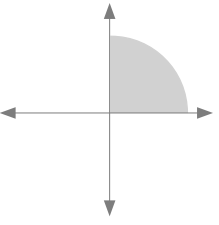
## Legend

- |               |                                   |
|---------------|-----------------------------------|
| ● Resilience  | ● Culture                         |
| ● Environment | ● Equity, diversity and inclusion |
| ● Economy     | ● Health and wellness             |





# Type 02: Central, mixed use



## Description

This type refers to industrial projects located in and around downtown and integral to the so-called new knowledge economy and service sector. These land areas are often perceived as being in constant transformation or renewal, and are primary drivers of the city's economic activity.

These central areas are well served by active transportation and public transit networks. They are also reliably connected to IT and fibre optic networks.

These are emblematic areas that enjoy international visibility and reputation. The architecture and landscapes bear witness to multiple historical periods and are often important markers of identity and culture.

They are flourishing living environments, in terms of both diversity and density of supply, uses and occupancies.

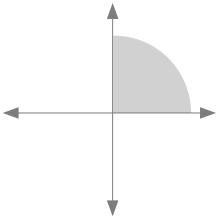
## Today

This type comprises attractive places with a dense and mixed built environment. These areas are served by active transportation and public-transit networks. The presence of residential communities and renowned architectural and landscape heritage requires sensitive and contributive integration of industrial uses. Visual, auditory and olfactory nuisances have direct impacts on the environment.

## Tomorrow

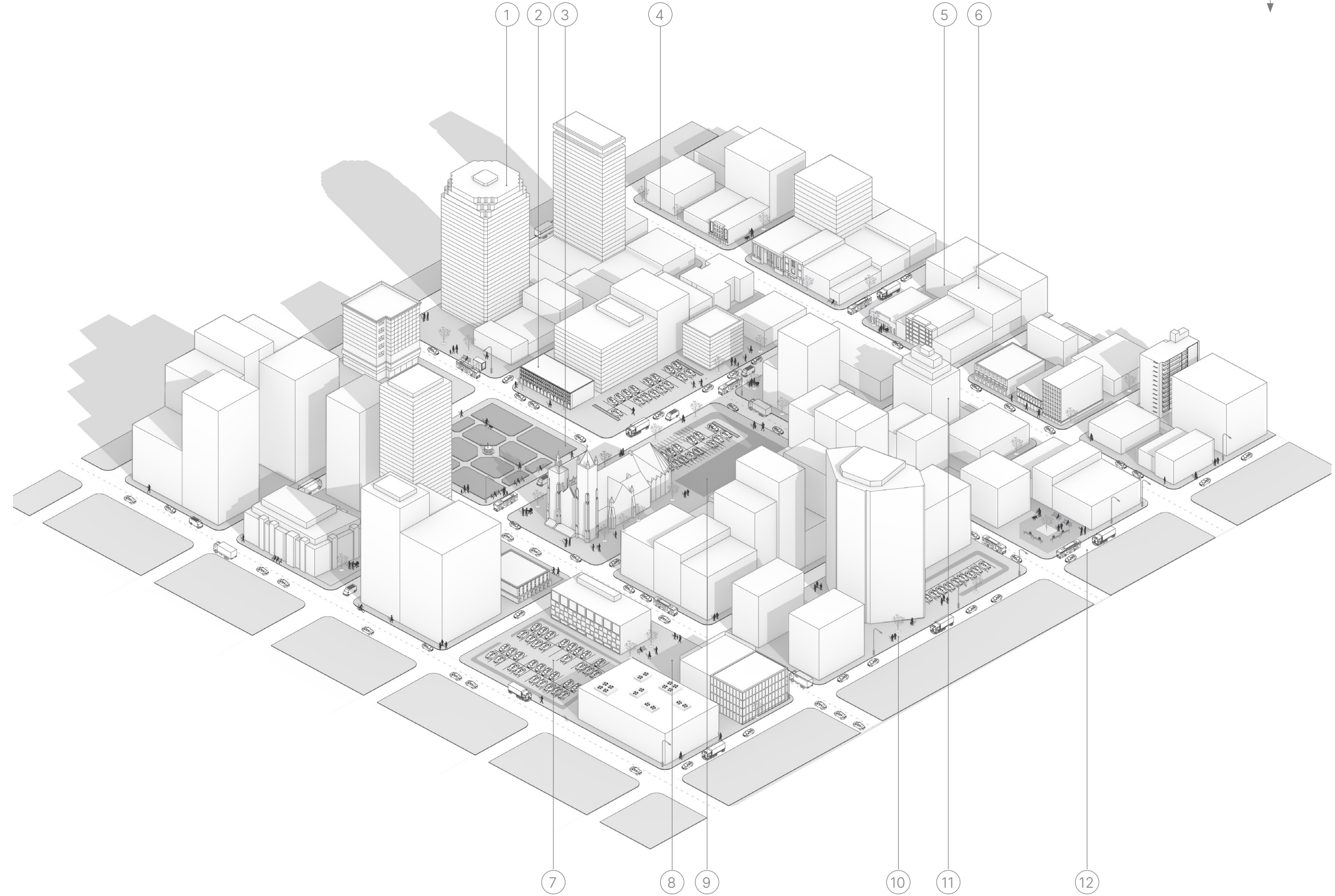
The urban and architectural integration of industrial and manufacturing activities in these central areas with progressive uses must be carefully planned to ensure that routes are permeable and user-friendly, that visual and noise pollution is reduced, and that sites are optimized through densification and vertical mixing of uses. The treatment of ground floors and the play of volumes are finely executed so as to open up, enliven and lend rhythm to the public domain. From a perspective of site optimization and enhancement of the living environment, the fifth façade (roof) also offers multiple opportunities for greening, community engagement, and incorporation of energy-generation equipment.

# The central, mixed use type today

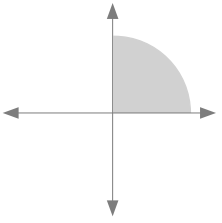


## Observations

- 1 Diversity of the built environment (height and volume)
- 2 Presence of heritage buildings
- 3 Identity-shaping and/or heritage public spaces and urban landscape
- 4 Uniform built frontage with little setback
- 5 Blind or low-permeability façades (materiality, rhythm, openings)
- 6 Tight or small lots with sizeable building footprints
- 7 Hardscapes and heat islands
- 8 Some underutilized or vacant lots
- 9 Proximity to the public domain
- 10 Limited canopy and biodiversity
- 11 Bioclimatic constraints (wind corridors, shading)
- 12 Co-existence of transportation modes in a context of dense road traffic

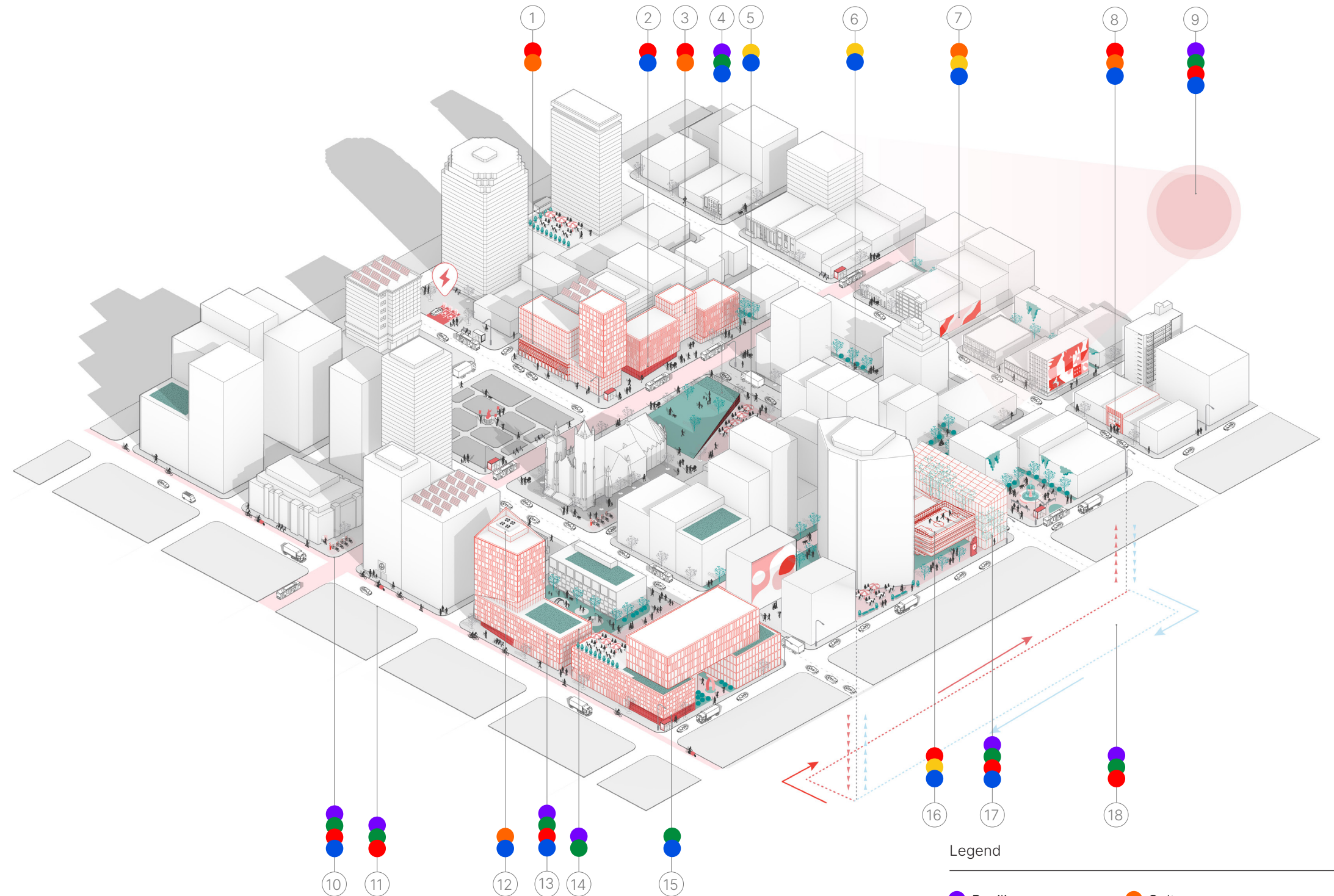


# The central, mixed use type tomorrow



## Opportunities

- 1 Preservation and enhancement of the site's heritage and memory
- 2 Horizontal and vertical densification and mixing of uses (local retail and services)
- 3 Articulation of the architectural volumes and openings, enlivening of the façades along the public domain (showcase)
- 4 Enhancement of the canopy and planting on sites
- 5 Public spaces that can be appropriated (e.g., terrasses, parks, small public squares)
- 6 Permeability of city blocks and enhanced active routes
- 7 Lighting plan, wayfinding/signage and urban art
- 8 Highlighting of industrial operations, equipment, and the roles of makers and workers (indoor and outdoor relationships)
- 9 Incorporation of bioclimatic design principles for energy efficiency and climate comfort
- 10 Creation of mobility hubs (e.g., bike parking, connected indoor and outdoor facilities, electric vehicle fleet)
- 11 Creation of urban logistics hubs (e.g., self-service vehicles, cargo bikes, small electric vehicles for deliveries)
- 12 Integration of mechanical equipment
- 13 Optimization of rooftops for improved views and commercial uses (e.g., urban beekeeping, grape and hops cultivation)
- 14 Ecological water management (e.g., retention ponds, recessed spaces)
- 15 Use of low-carbon-footprint materials
- 16 Incorporation of recreational amenities for public and private use
- 17 Urban farming, indoor "green lung"
- 18 District heating network and energy efficiency



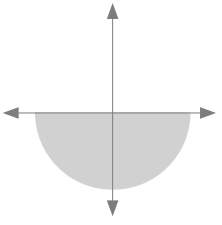
### Legend

- |               |                                   |
|---------------|-----------------------------------|
| ● Resilience  | ● Culture                         |
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# Type 03: Peripheral, monofunctional or mixed use



## Description

This type refers to non-extensive industrial projects in peripheral areas.

Development of these industrial zones is intrinsically linked to that of the road infrastructure (e.g., highways 13, 15, 40, 520) in the economic globalization and post-war context.

In areas with monofunctional uses, warehouse spaces as well as goods transshipment and distribution centres are abundant. Related uses have been added over the years, e.g., administrative offices, wholesale businesses and head offices.

The mixed-use land areas are home to biomedical and technology laboratories as well as research and development companies (e.g., environmental technologies, telecommunications).

Regardless of the type of land, the urban, landscape and architectural aspects of these projects are similar.

The architectural fabric is fairly generic, functional and standardized, following the logic of process and operations optimization. The built environment is contained within ample landscaped and underutilized setbacks. Motorized transportation (cars, trucks) continues to predominate.

These areas are not well served by public transit or active transportation modes.

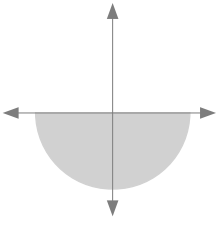
## Today

Ce type présente d'importants enjeux liés à la monofonctionnalité des sites et des quartiers (absence de services et commerces de proximité, faible densité et desserte, etc.) et à la monotonie du milieu à l'égard de l'architecture et du paysage (murs aveugles, faible hauteur, omniprésence des aires de stationnement, etc.). La présence d'importantes barrières physiques, combinée à une faible convivialité des parcours privilégiant les modes motorisés, rend peu attractif le transport actif et collectif. Dans certains cas, la proximité d'importantes zones boisées ou humides est un facteur d'attractivité. Ce cadre paysager naturel requiert une sensibilité quant à la réduction des impacts environnementaux des activités et à l'intégration du cadre bâti et des aménagements extérieurs.

## Tomorrow

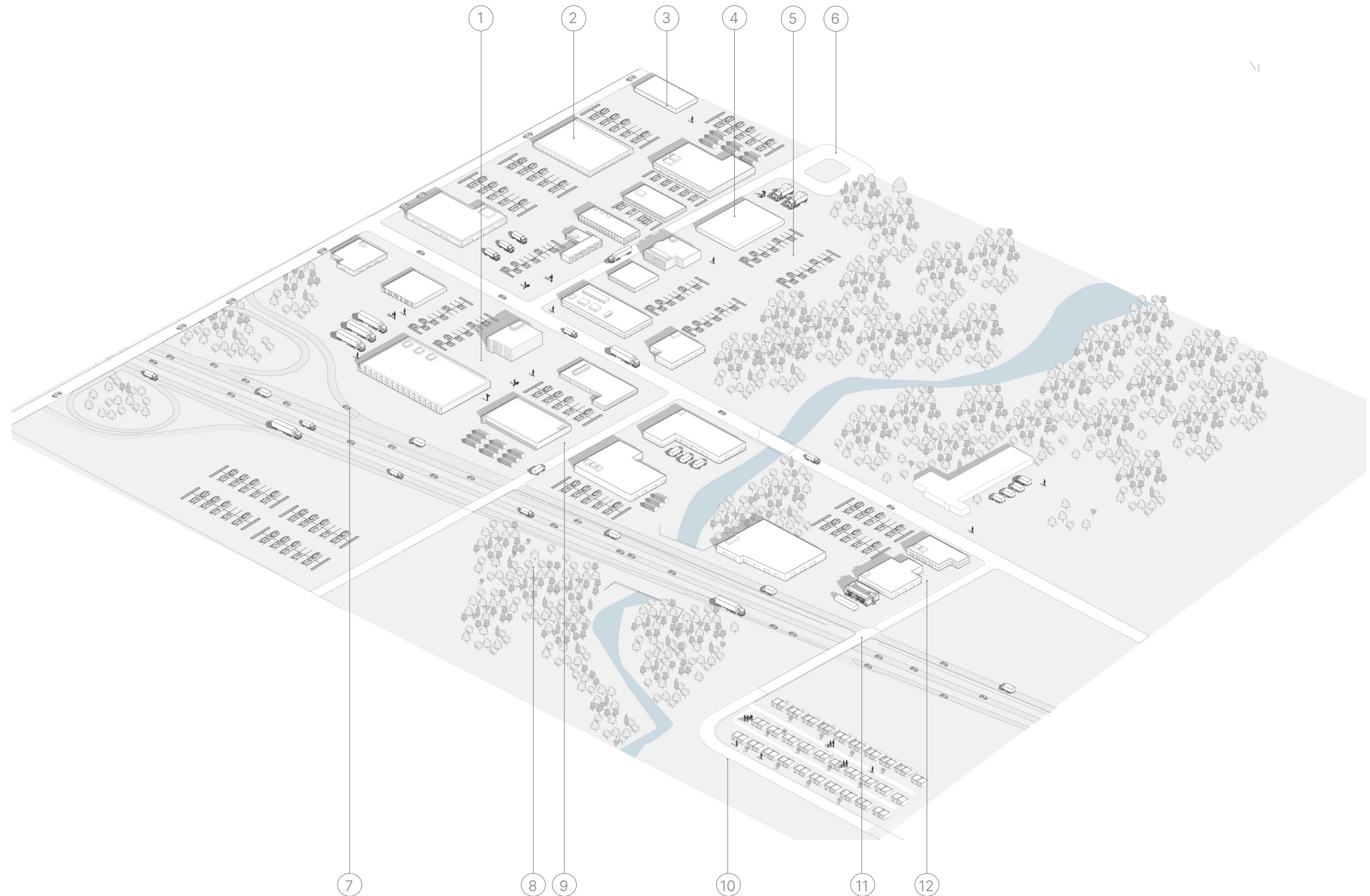
Ce type offre des possibilités de densification et de diversification des usages. Les projets sont à l'échelle humaine, ils contribuent à un milieu de vie dynamique. Ils s'implantent de manière sensible au contexte, en optimisant les superficies, en offrant des usages et services complémentaires à l'existant, en dynamisant les volumétries, en personnalisant l'enveloppe et les façades, et en offrant des accès et des circulations accueillantes et inclusives. À une échelle plus large, les industriels développent des chaînons et des réseaux de partage et de mutualisation des ressources et des espaces (stationnement, services, infrastructures, etc.).

# The peripheral, monofunctional or mixed use type today



## Observations

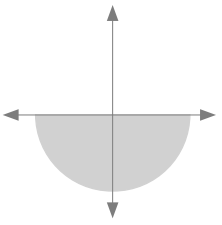
- 1 Medium- to large-area lots
- 2 Minimal use of the lot surface area
- 3 Blind or low-permeability façades (materiality, rhythm, openings)
- 4 Predominance of warehouse-type buildings: low-rise rectangular boxes (generic, minimalist architecture)
- 5 Extensive hardscaped surfaces used for parking, loading and warehousing (significant heat islands)
- 6 Complex road network and enclosed sites (e.g., dead ends, bypasses)
- 7 Physical barriers: highways and wide boulevards
- 8 Presence of woodlands or wetlands
- 9 Lack of identity-shaping markers or signage (anonymous site with no specific identity)
- 10 Unwelcoming public domain; lack of sidewalks
- 11 Road-network scale and hierarchy prioritizes cars and trucks
- 12 Considerable and underutilized setbacks





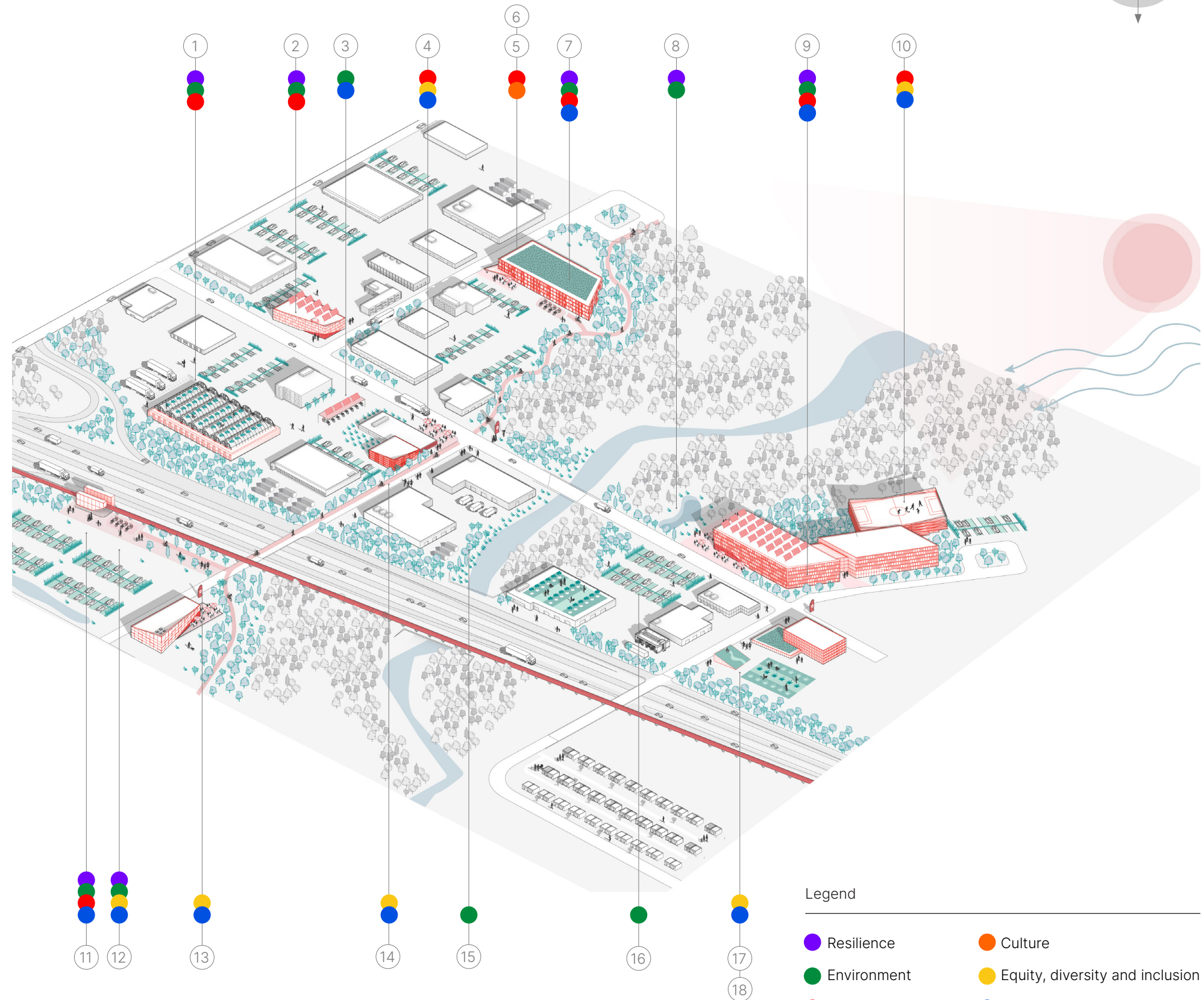
# The peripheral, monofunctional or mixed use type

## tomorrow



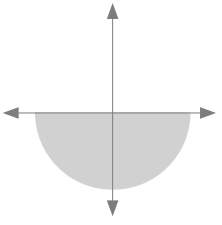
### Opportunities

- 1 Food production and processing for local consumers (self-sufficiency and waste reduction)
- 2 Clean energy production and energy sharing among building occupants
- 3 Addition of bike stations to encourage active travel
- 4 Activation of the public interface at strategic locations (e.g., intersections) to enliven the space and ensure collective, inclusive appropriation
- 5 Densification of lots and alignment of the built environment with the public domain
- 6 Mixed uses and incorporation of new uses
- 7 Treatment of rooftops to enrich green corridors, reduce the heat island effect, and foster green recreational or commercial uses
- 8 Incorporation of a retention pond for recovery and ecological use of stormwater
- 9 Incorporation of bioclimatic design principles to improve building energy efficiency as well as user comfort and wellness on the site and in the building
- 10 Exploitation of the fifth façade to provide shared spaces (sports fields/courts)
- 11 Rollout of a structure-enhancing supply of active facilities on private lots (REM, métro line) so as to promote active transportation and public transit modes
- 12 Creation of a sustainable, accessible mobility hub that obeys universal design principles and fulfils diverse conditions and needs (e.g., self-service bikes and electric scooters)
- 13 Contribution to safety as well as ease of access to and circulation on the site through universal wayfinding/signage and a strategic lighting plan for the site
- 14 Enhanced permeability of lots with through-connections of recreational bikeways
- 15 Connections to and widening of green and blue corridors
- 16 Removal of hardscapes and redevelopment into sustainable, eco-friendly parking
- 17 Implementation of transition zones to minimize nuisances (e.g., embankments for sliding sports, lookout)
- 18 Transformation of underutilized spaces in collaboration with the neighbouring community to promote sharing and exchanges





# Type 4: Peripheral, extensive monofunctional or mixed use



## Description

This type refers to projects located in heavy industrial zones that are home to extensive industrial operations.

They require very large lots, are outlying and are clustered around major transportation facilities, structural infrastructure and energy providers to ensure more efficient product procurement and distribution (e.g., port, airport, rail yards, pipelines, power plants).

These areas are typically monofunctional and enclosed by transportation infrastructure (railroads and highways) and/or other physical barriers (e.g., fences, embankments).

They tend to generate significant visual, auditory or olfactory nuisances (e.g., air pollution, odours, noise, dust, trucking) that adversely affect the quality of adjacent living environments. Large expanses of soil are contaminated.

These areas are not well served by public transit or active transportation modes.

## Today

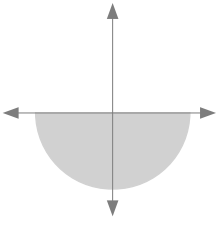
This type of area poses significant and multidimensional challenges given the scale and nature of the activities conducted there. Safety, co-existence and organizational efficiency of land use and projects are among the key considerations for renewal of these areas. A further concern is the desired perception of these industrial areas: since most of them are essential to urban procurement and logistics (e.g., sorting centres, port facilities and rail yards, clean energy), how might they be welcomed and celebrated as landmark places and landscapes in Montréal?

## Tomorrow

This type is still highly functional in terms of its design and layout. Manufacturing companies continue to prioritize safety and to develop innovative solutions for mitigating nuisances and the impacts of their operations on people and the environment.

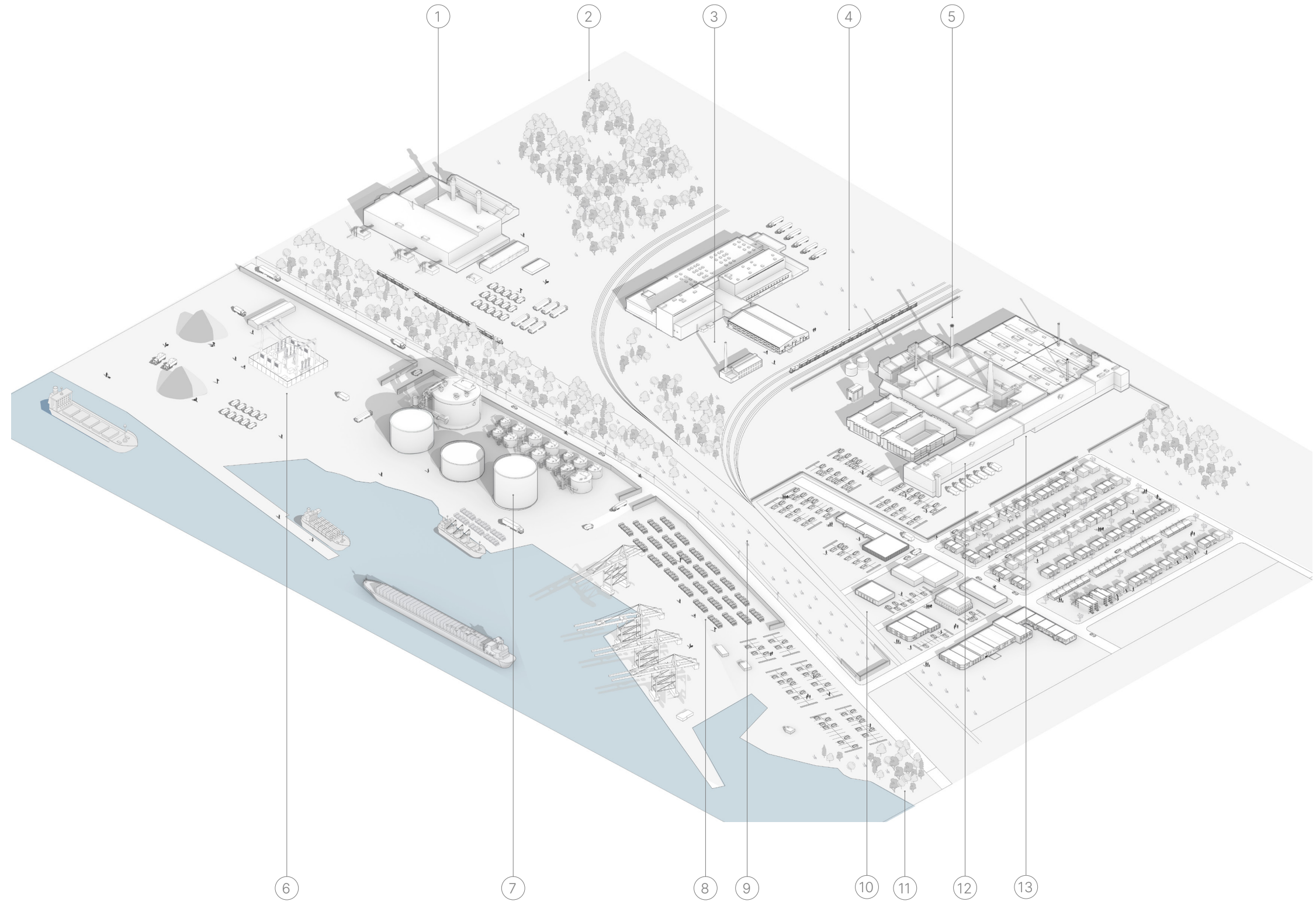
The projects and industrial activities are rooted in their specific contexts and contribute to renewal of the landscape. The user experience is enhanced through targeted strategic interventions at different scales of the built environment (e.g., entrances, accesses, interfaces, rest areas). The industrial companies work together, cohabitating and collaborating to optimize not only the living environment, but also their processes and productivity (pooling and industrial symbioses).

# The peripheral, extensive monofunctional or mixed use type today



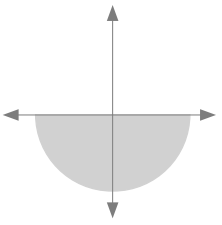
## Observations

- 1 Large buildings with substantial footprints
- 2 Urban brownfields with scattered vegetation
- 3 Very-large-area lots
- 4 Physical barriers: rail lines, electric pylons, fencing)
- 5 Nuisance-generating industrial activities (e.g., auditory, visual, olfactory)
- 6 Heavy equipment and infrastructure that present complex co-existence challenges (Hydro-Québec transformer station)
- 7 Storage of materials that present high risk to civil security (tanks, cylinders)
- 8 Extensive hardscaped surfaces used for outdoor storage, manoeuvring and parking
- 9 Unwelcoming urban environment that is unsafe for active travel
- 10 Underutilized and unattractive setbacks
- 11 Sparse woodlands and wetlands
- 12 Poor architectural quality of the built environment, blind façades
- 13 Segregation of uses and inadequate access to local community retailers and service providers



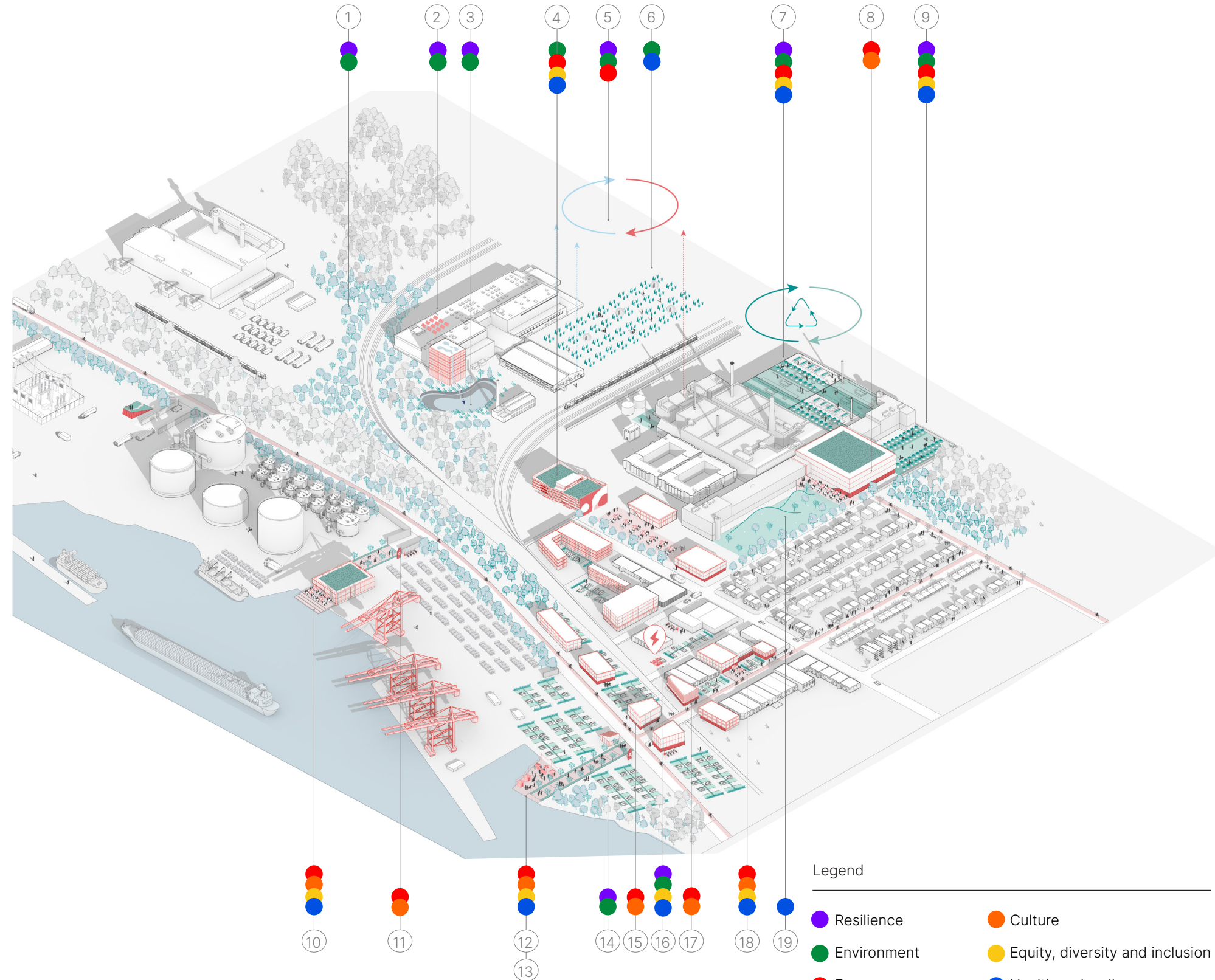


# The peripheral, extensive monofunctional or mixed use type **tomorrow**



## Opportunities

- 1 Conservation of forest cover and reconnections of biodiversity corridors
- 2 Production and storage of renewable energy (e.g., solar panels)
- 3 Incorporation of a system for stormwater and runoff recovery, filtration and reuse
- 4 Pooling of equipment and infrastructure (e.g., loading dock, multi-level parking, innovation lab)
- 5 Industrial synergies for sharing of energy and resources
- 6 Innovative technology for soil decontamination (e.g., phytoremediation, pollutant capture)
- 7 Optimization of rooftops (farming) and recovery of organic residue
- 8 Densification of lots and alignment of the built environment with the public domain
- 9 Creation of farmable spaces for local production and consumption (community garden)
- 10 Democratization of shoreline accesses (access point with services)
- 11 Contribution to shaping local identity through carefully designed signage and displays
- 12 Highlighting of the landscape through creation of viewpoints, visual openings and landmarks
- 13 Temporary occupancy of underutilized spaces through transitional urban projects
- 14 Implementation of sustainable, eco-friendly parking areas
- 15 Vertical and horizontal mix
- 16 Creation of sustainable mobility hubs
- 17 Redefinition and enlivening of public interfaces through the architectural treatment of ground floors)
- 18 Optimization of setbacks to provide lively public spaces and incorporate local community retail businesses and service providers
- 19 Integration of mitigation and awareness measures regarding nuisances (embankments, canopy)





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