

KwaDukuza CBD Regeneration

Phase 3: Conceptual Masterplan



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1.1 Context

Background

KwaDukuza Municipality is a unique town rich in history, commercialism, and administrative functions. The constant intensity of pedestrian activity makes the dynamic CBD vibrant throughout the year, and its close connectivity to the N2 and R102 allows for constant motor traffic in and out of the site. The taxi rank and regional hospital are major pulls for the municipality and provide a great opportunity to capitalize on the human networks flowing between them.

After a detailed situational analysis, IYER synthesized the greatest issues of the site as well as prime opportunities for strengthening the core, providing a greater economic prospects, and creating a public realm to benefit the residents of the site as well as draw in tourists to experience the KwaDukuza Municipality.

Purpose

The purpose of an urban design framework plan for KwaDukuza Municipality is to not only revitalize but transform the town center into a thriving and resilient place for residents and visitors alike. With the urban design framework in mind, the following goals are set in place:

To revitalize the town center into a thriving mixed-use district to promote economic growth, historical heritage, and infrastructure resiliency;

To encourage a pattern of perimeter block development to define the public edges and continuity of built fabric;

To encourage an enlivened streetscape through promoting an active base for buildings framing the primary boulevards;

To utilise urban form as a backdrop to a lively and animated public realm.



2.1 Points of Interest

Within the CBD, major anchors such as Stanger Hospital and KwaDukuza Mall, and local pulls such as schools and commercial shopping, create a bustling taxi rank and high pedestrian traffic on many of its streets. While the shortest route from the taxi rank to the hospital is just over a kilometer, the steepness of the site and lack of shade result in a strenuous experience.

With very little green cover, the CBD currently holds hardly any public space for social gathering or the ability to rest. The hardscape sidewalks hold neither street furniture or shade trees, key items in pedestrian comfort.

Route Distance from Taxi Rank

Route A =	415 meters
Route B =	1280 meters
Route C =	1290 meters
Route D =	1275 meters
Route E =	995 meters

TO HOSPITAL

	Green Cover
	Hard Surface



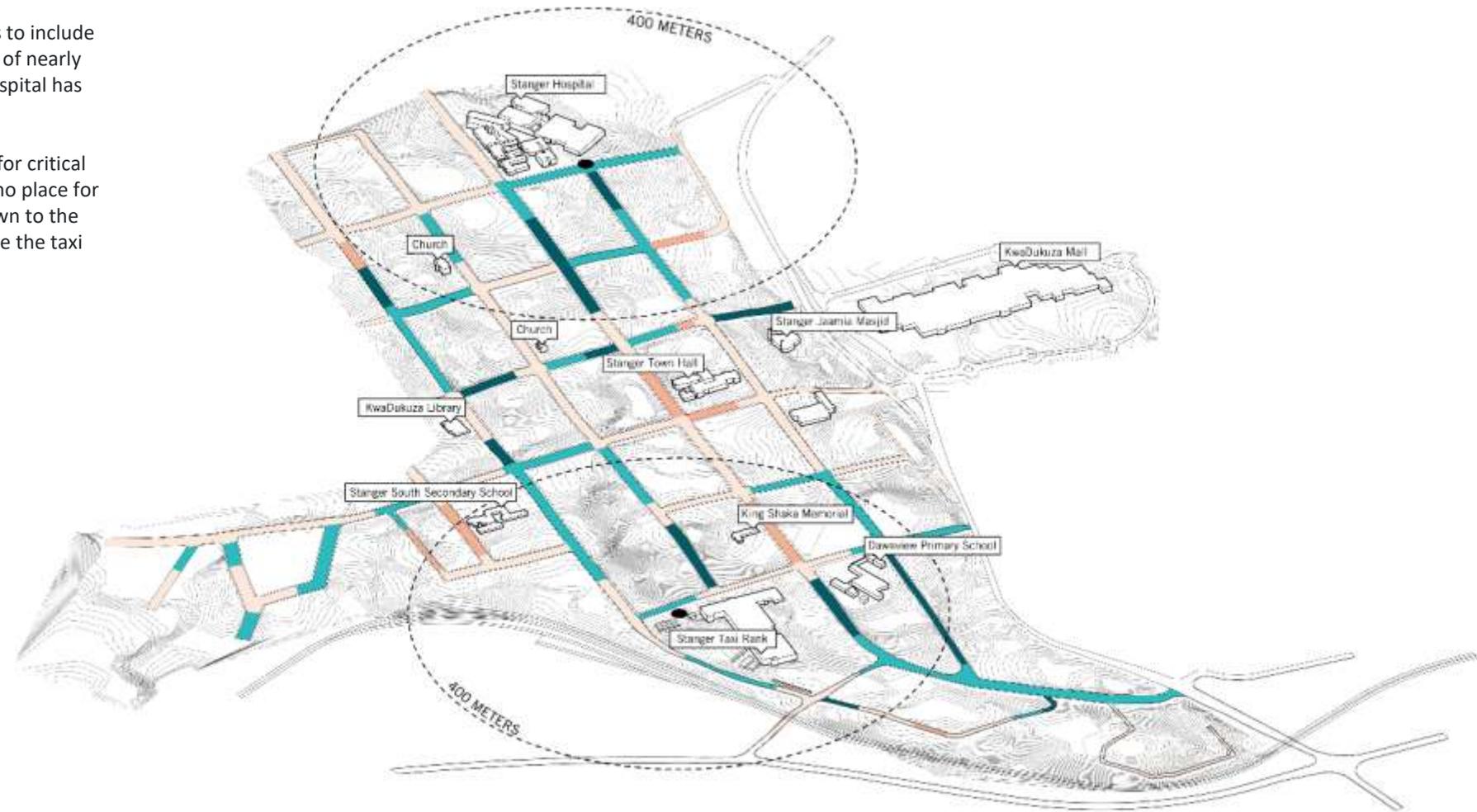
2.2 Walkability

Walkability goes beyond distance between points to include efficiency and comfort. With an elevation change of nearly 40 meters, any route from the taxi rank to the hospital has severe implications for pedestrian comfort.

The steepness of the site also creates challenges for critical services such as stormwater management. With no place for stormwater to be detained, much of it rushes down to the lower ends of the site, one of which happens to be the taxi rank.

Road Steepness

	Level	<1%
	Gentle	<4%
	Moderate	<7%
	Steep	<10%

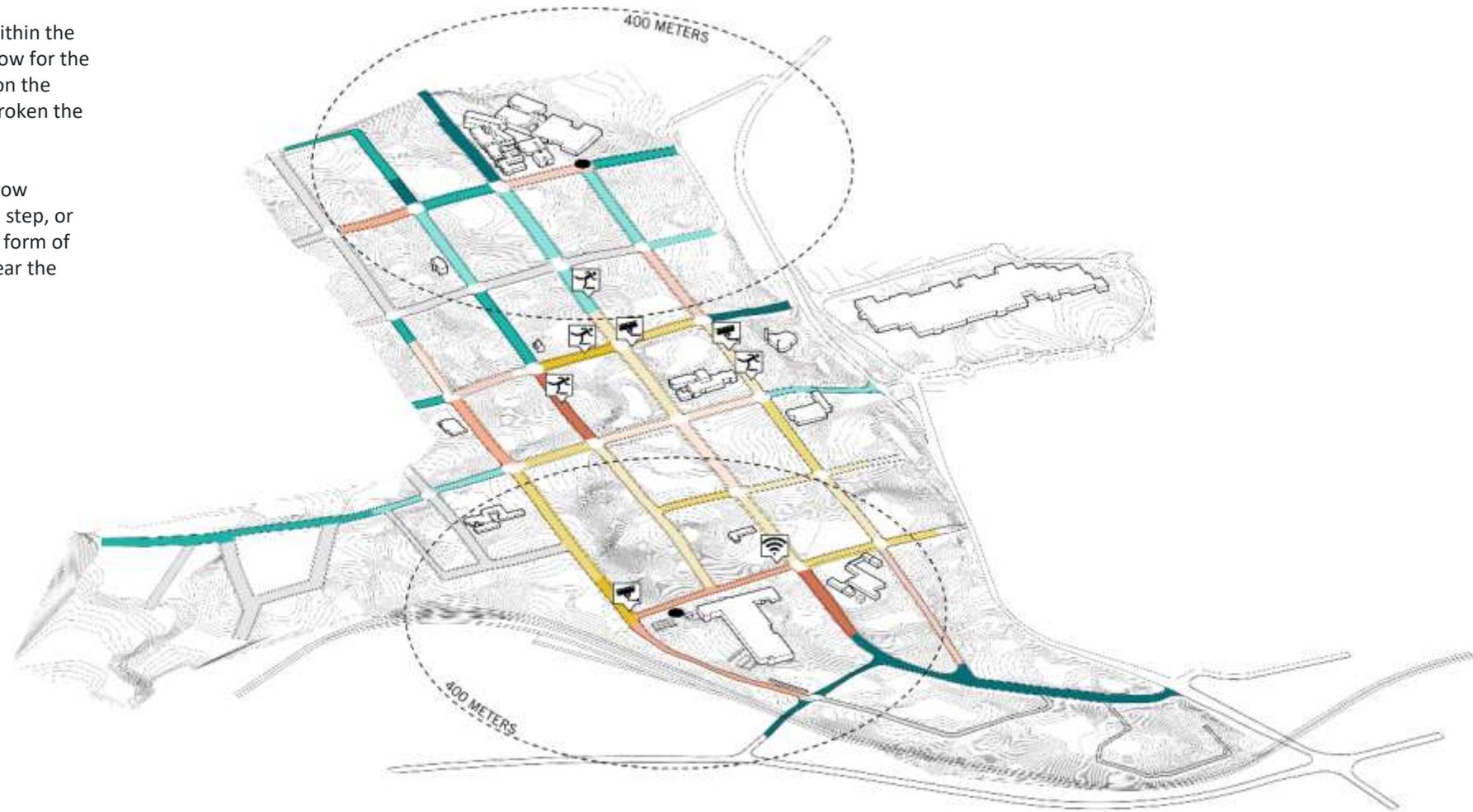
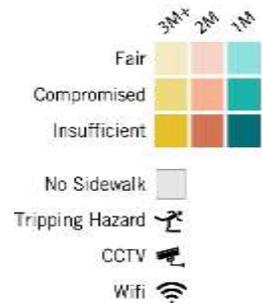


2.3 Pedestrian Comfort

In addition to steepness, many of the sidewalks within the CBD need serious repair. Quite a few are too narrow for the daily pedestrian traffic and cause people to walk on the street instead. On others natural disruption has broken the concrete or rubbish has been left strewn about.

Tripping hazards are found on both wide and narrow sidewalks in the form of pipes sticking out, a large step, or tree roots growing out of the pavement. The only form of security comes from the CCTV cameras located near the municipality offices and one near the taxi rank.

Sidewalk Condition

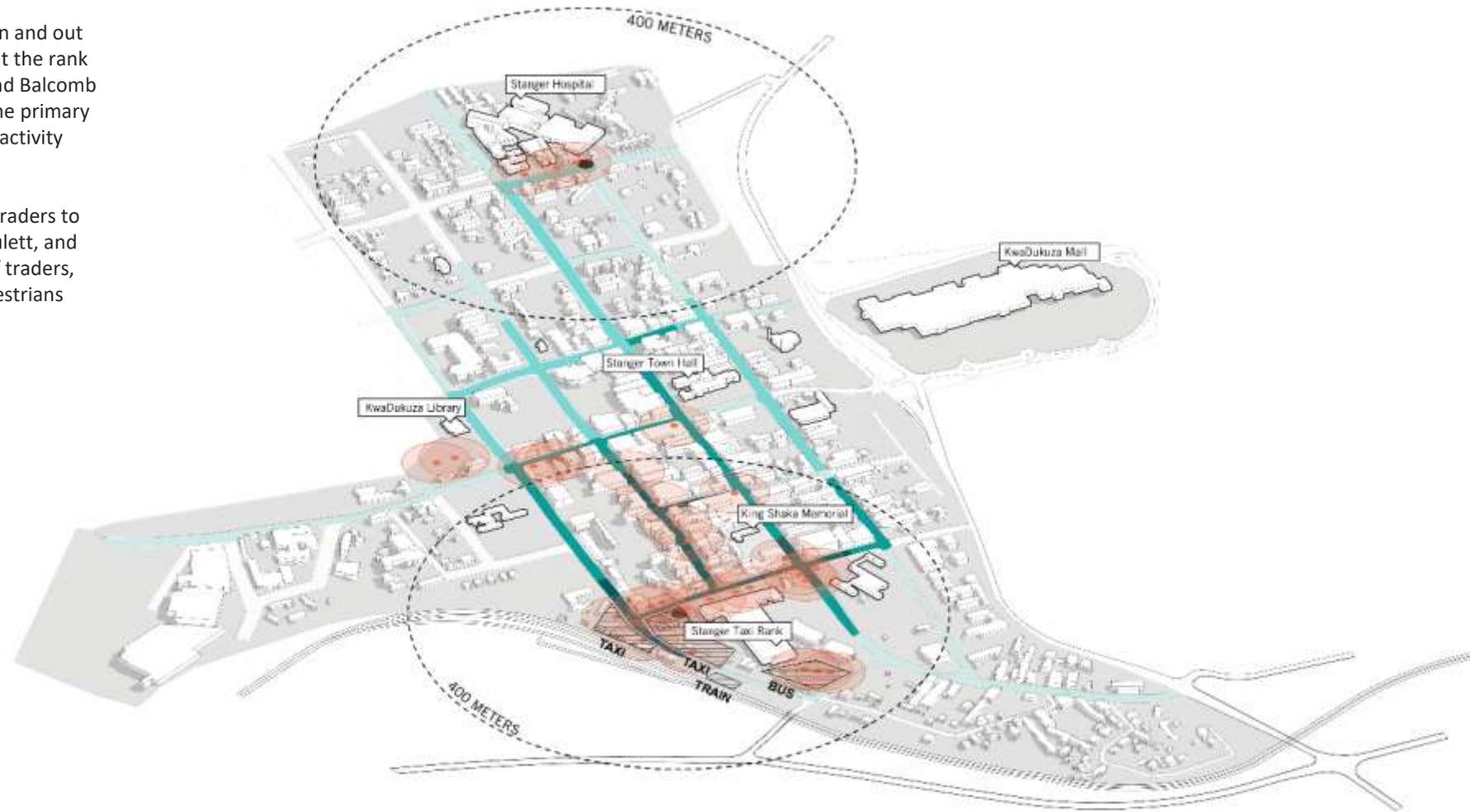
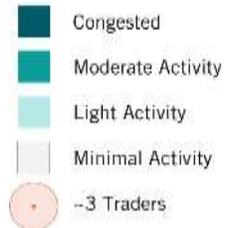


2.4 Intensity + Traders

The taxi rank provides a constant flow of people in and out of the CBD. With primary congestion happening at the rank itself, many pedestrians use Hulett, King Shaka and Balcomb Streets to reach their destination. King Shaka is the primary route to the hospital although lesser commercial activity occurs in the west end of the site.

In turn this pedestrian activity sparked plenty of traders to set up their stalls on the busiest streets: Cato, Hulett, and King Shaka. Although because of the multitude of traders, some sidewalks have little residual space for pedestrians and are sometimes forced onto the street.

People Intensity

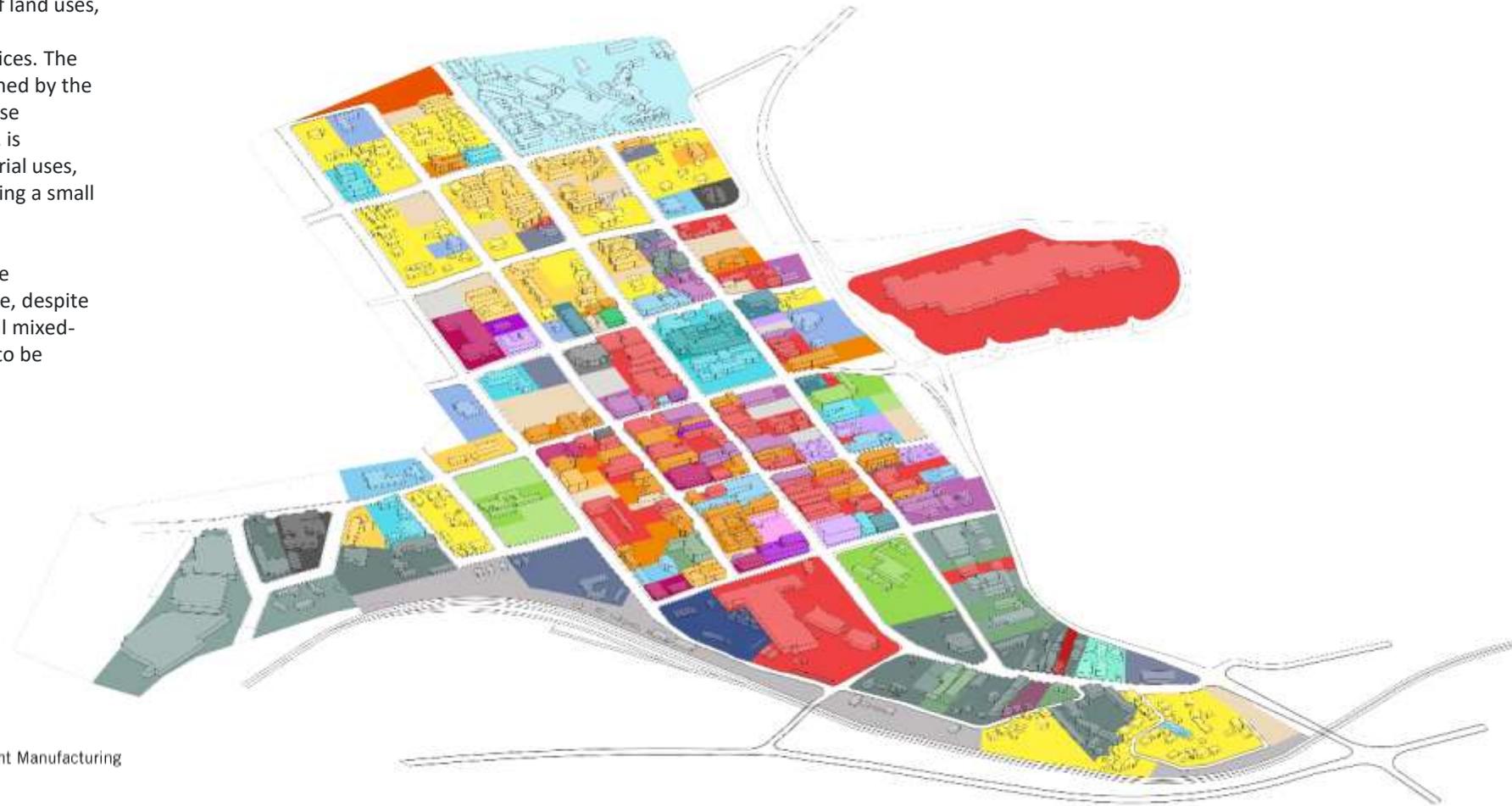


2.5 Land Use

The core of the town center offers a wide array of land uses, mostly catering to a typical CBD such as shops, supermarkets, clothing stores, and specialty services. The western end, or upper component, is largely defined by the regional hospital, and residential blocks with sparse amenities. The eastern end, or lower component, is characterized primarily by transit and light industrial uses, with a small amount of single-family homes creating a small residential precinct.

The new shopping mall just north of R74 has some responsibility in negatively affecting the retail core, despite the diverse uses available. With a lack of a general mixed-use residential within the town center, a density to be considered resilient over time is greatly needed.

Land Use



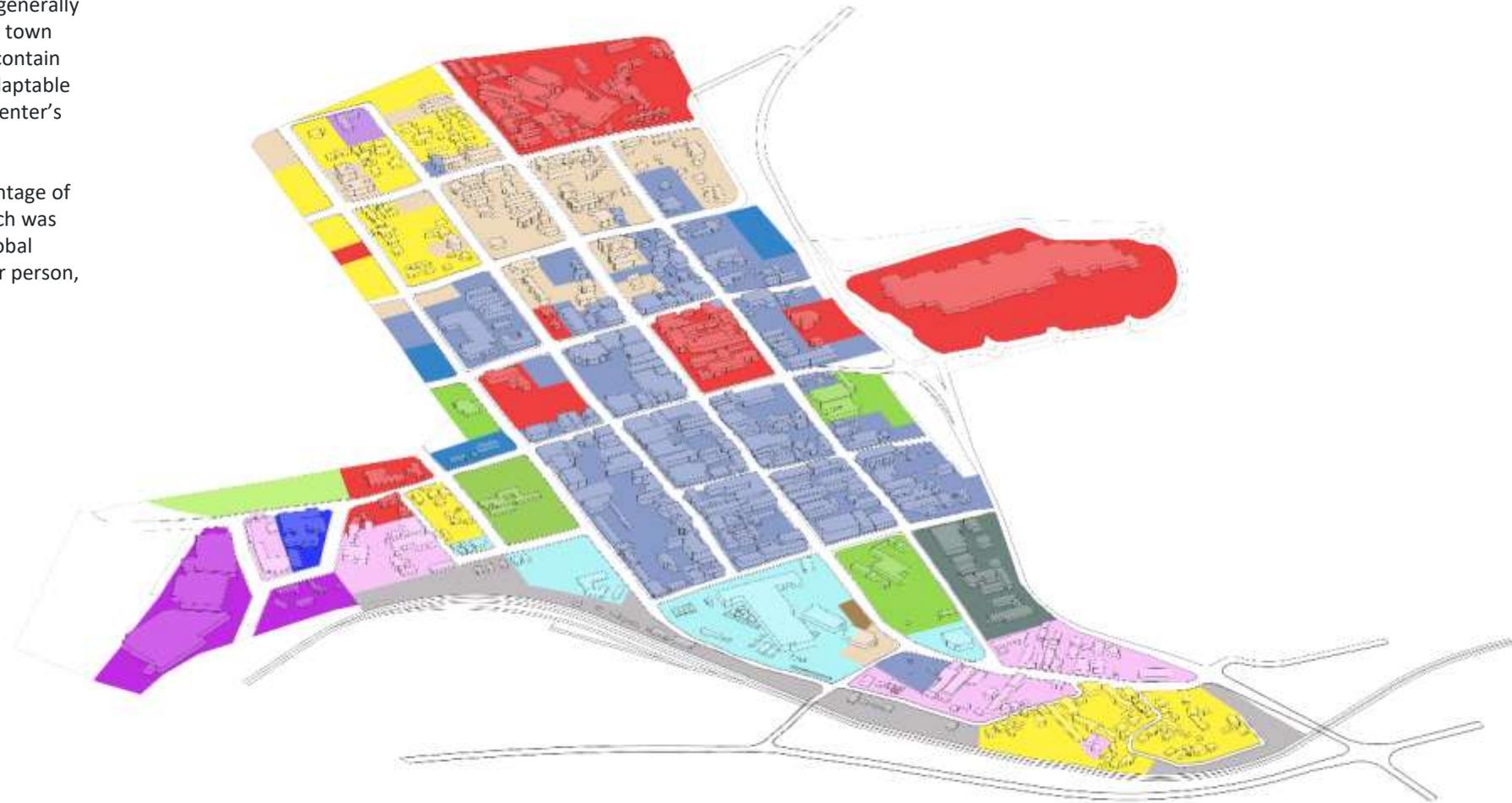
2.6 Permitted Zoning

The zoning plan for the KwaDukuza Municipality generally aligns with the current activities found within the town center. However, well-performing urban spaces contain mixed-use blocks as they are considered more adaptable and resilient over time, as opposed to the town center's purely commercial core.

Currently the town center has a very small percentage of land allocated to public open space, some of which was given to suit the KwaDukuza Mall in 2018. The global standard for public open space is 0,48 to 4 HA per person, and KwaDukuza Municipality falls greatly behind.

Permitted Zoning

- General Commercial
- Administration
- Education
- Public Open Space
- General Residential
- Special Residential
- Worship
- Professional Office
- Garage
- Light Industry
- Special Use
- Public Car Park
- General Industrial
- Railway
- Service Industry



2.7 Building Height

Commercial and mixed-use has a height restriction of 6 stories but most development within the KwaDukuza Municipality is limited to 2 or 3 stories. The same pattern is found in the upper component where high density residential is permitted 6 stories but at most is developed to 4 stories.

However paired with the vacant land parcels, new development can take advantage of these building controls and introduce a new type of high density residential or mixed-use development within the core.

Building Height

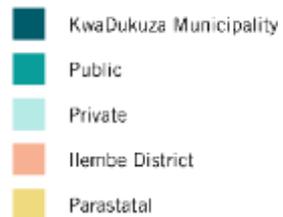


2.8 Land Ownership

A major challenge for development in the municipality is that 80% of land is privately owned. Municipality-owned land is mostly built up with very little opportunity to develop further. The next greatest ownership is public land owned by the Republic of South Africa, including the hospital, several schools and municipality buildings.

As such, it is crucial multiple private landowners collaborate with the municipality for CBD regeneration. These public-private relationships can co-create a lively urban environment for both residents and visitors alike.

Land Ownership



KEY CHALLENGES

3.1 Areas of Opportunity

Accessibility

KwaDukuza CBD is highly pedestrianized, but with a great need for multi-mobile enhancements and introducing new means of sustainable transit.

Infrastructure

Along with accessibility comes the need for infrastructural upgrades for water, waste, security, and an opportunity for technological improvements.

Cultural Tourism

With the CBD's rich history, KwaDukuza has a tremendous opportunity to showcase its heritage for both residents and visitors.

Local Economy

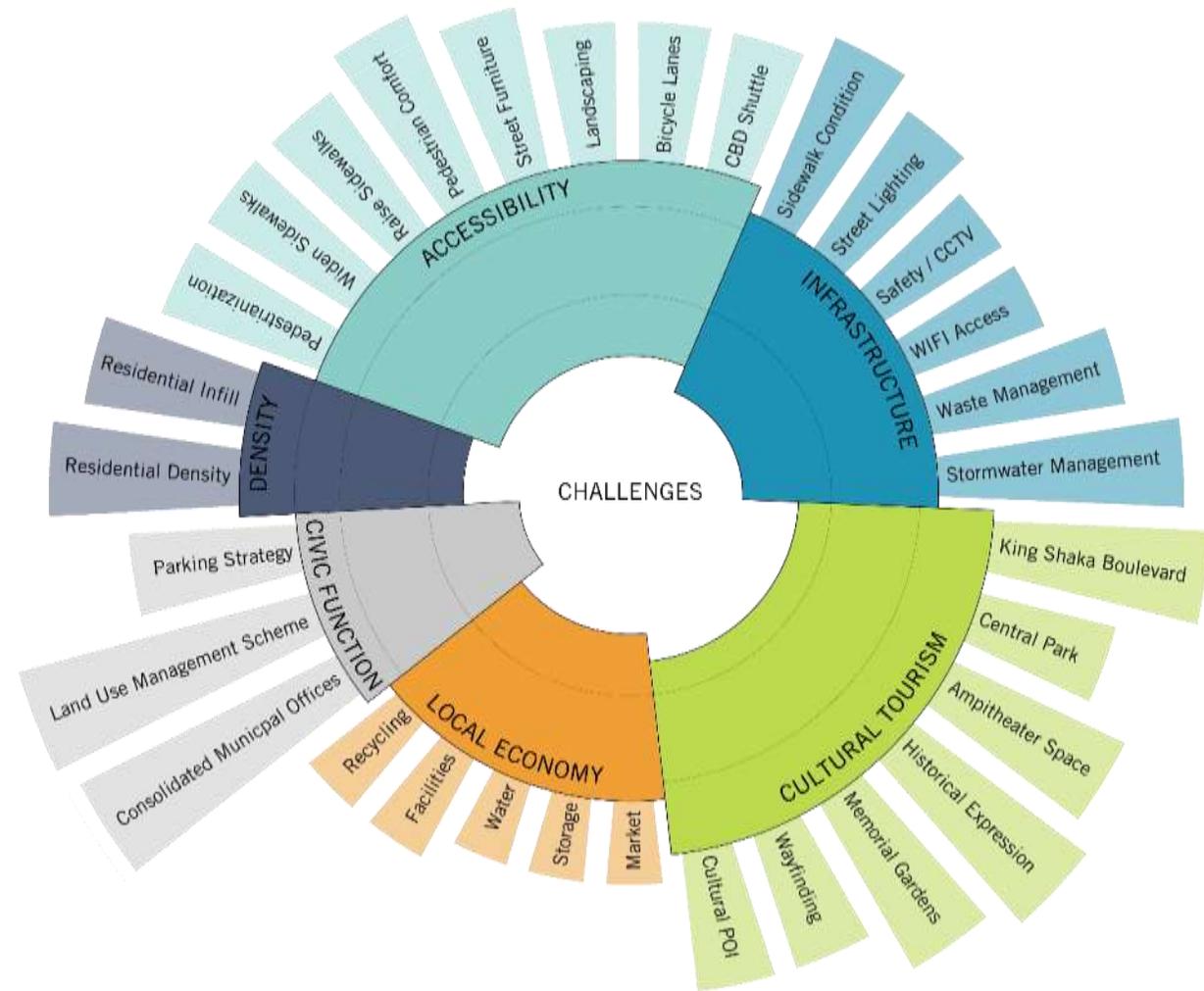
KwaDukuza's informal economy is seen all over the CBD with very little dedicated space or provisions. A fixed spatial structure is needed along with storage and facilities.

Civic Function

Overall performance of the CBD can be optimized by a civic precinct and reassessing the LUM and parking schemes.

Density

With space for development, incentives can be offered for multi-family housing and additions to existing property.

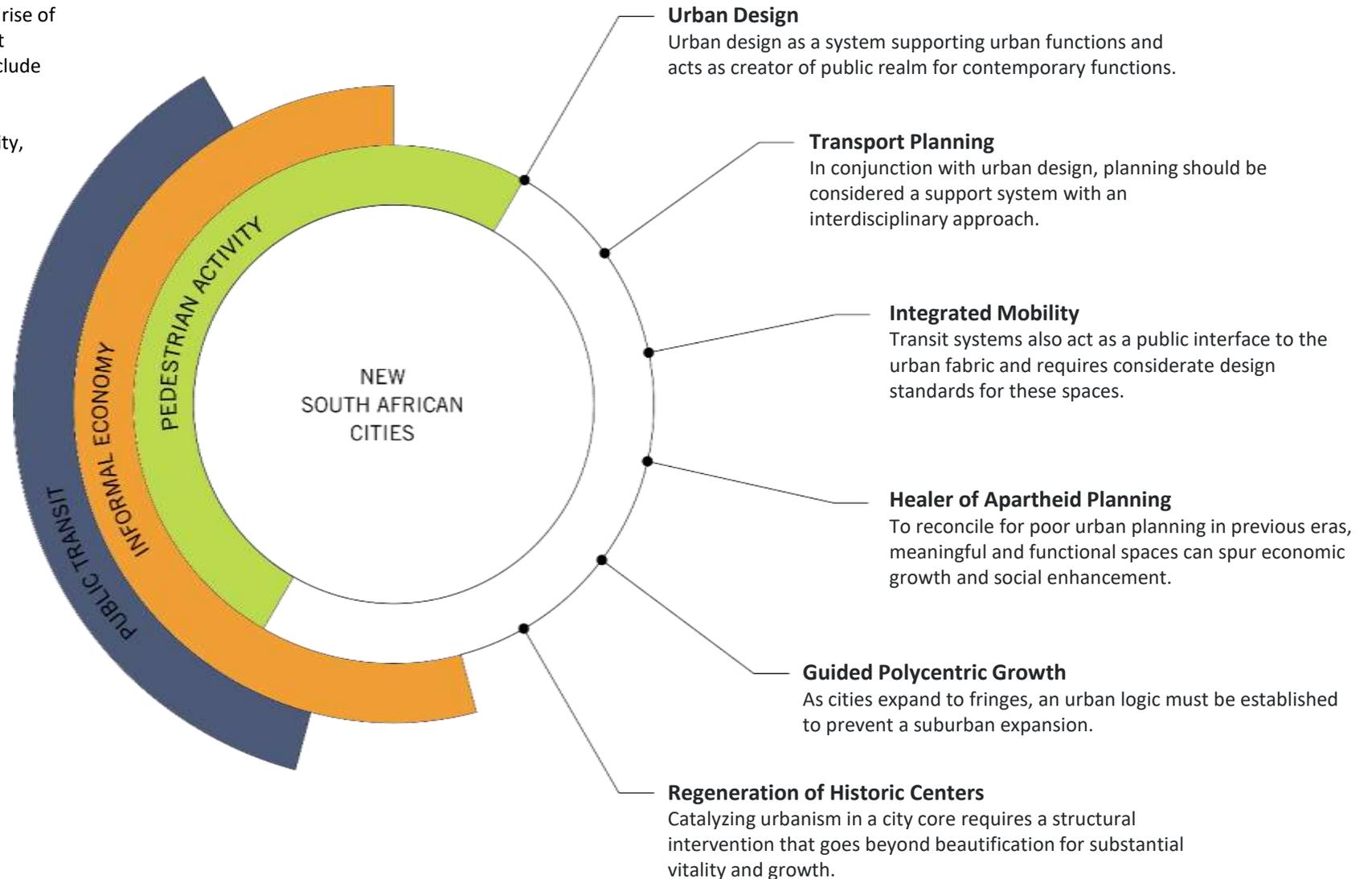


3.2 Approach to Urban Renewal in South African Cities

Recent trends within South African cities indicate the rise of new influences from that of the traditional forces that shaped cities in the past. Some of these influences include the growth of the informal economy, increases in pedestrian-based activity, and an increasing interdependence of public transport with urban activity, often working as an extension of informal economy.

The impact of these influences has contributed to a new vibrancy within CBD cores and in secondary urban centres. Cities are once again being understood as centres for people and their success is dependent on how well cities support functions that are pedestrian and human scaled.

The significance of this set of influences from an urban design perspective, is that the stage for these activities is wholly within the public domain, which often operates within the margins of urban systems and with very little conscious support.



4.0 Framework Plan

01 Movement + Circulation

With the high amount of regular pedestrian traffic, optimizing this flow is a main priority for upgrading the CBD core. This includes dedicating more space to pedestrians, providing ease of access, and a public shuttle for common destinations.

02 Public Realm

Providing a range of public open spaces is also key for a vibrant town center. With no public plazas or green spaces, KwaDukuza Municipality has a prime opportunity for a variety of parks and public placemaking throughout the core.

03 Activity Structure

With a slight redistribution of program, the town center can create a civic precinct that holds a variety of functions. Revitalizing program along main corridors can also provide a new means of public space and activity.

04 Built Form

Along newly designed streets existing buildings can be upgraded to a new green standard for building efficiency and user comfort. New development can also introduce new means of building design and street interface.



4.1.0 Movement + Circulation

Objectives

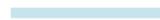
- Create an accessible and walkable town center.
- Encourage non-motorized transit through quality of sidewalks and public spaces.
- Utilize pedestrian activity as an instigator for the local economy.
- Prioritize pedestrian activity over vehicular movement.
- Introduce a supportive public transit system.

Proposals

- Pedestrianize portion of Cato Street fronting the taxi rank and shopping center and the two blocks of Hulett Street between Cato and Chief Albert Luthuli Streets.



- Upgrade sidewalk infrastructure and condition on all major streets.



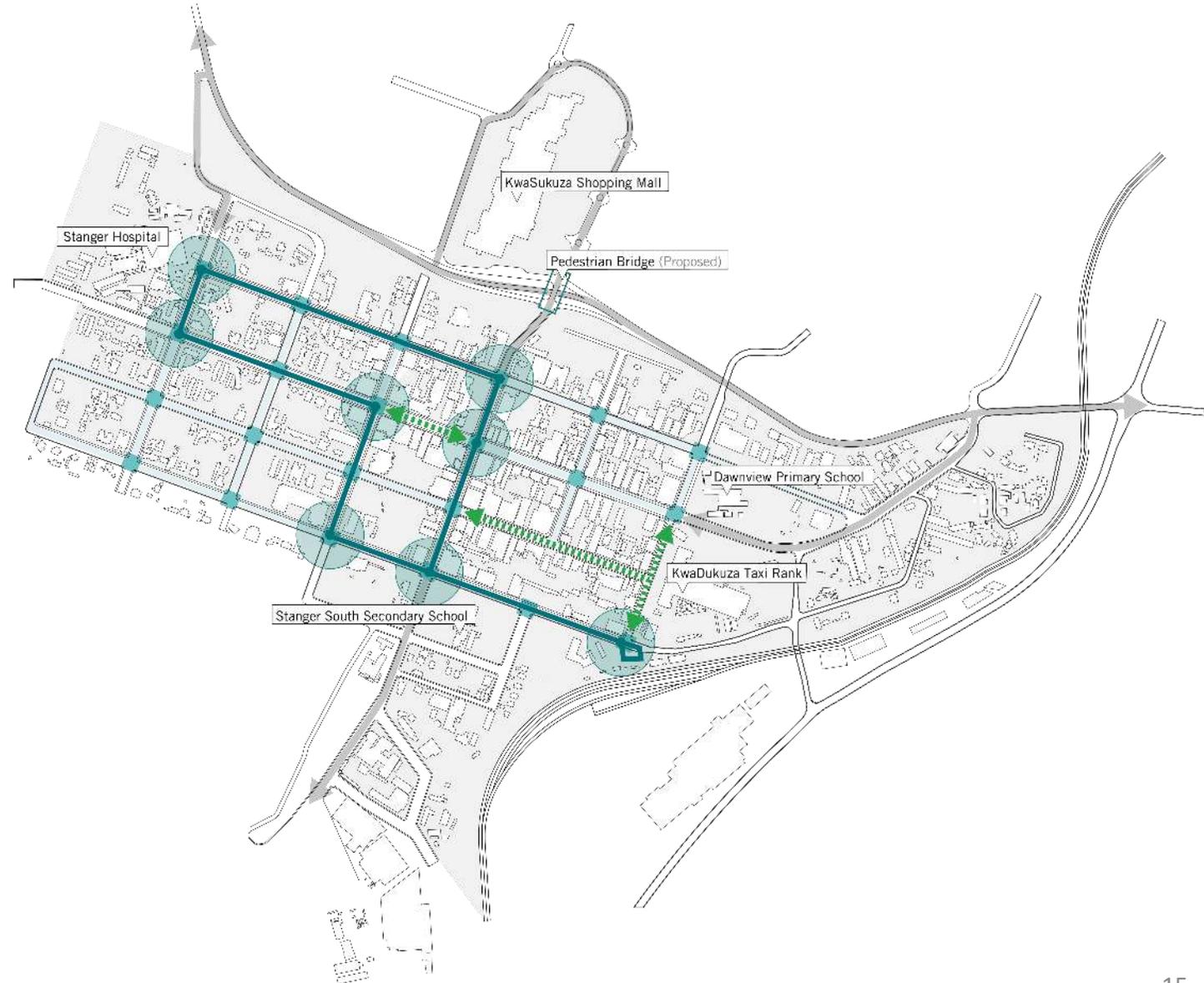
- Raise intersections with different material to make more pedestrian friendly.



- Introduce CBD bus shuttle with route from taxi rank to hospital.



- Adjust road reserves to widen sidewalks and restrict street width.

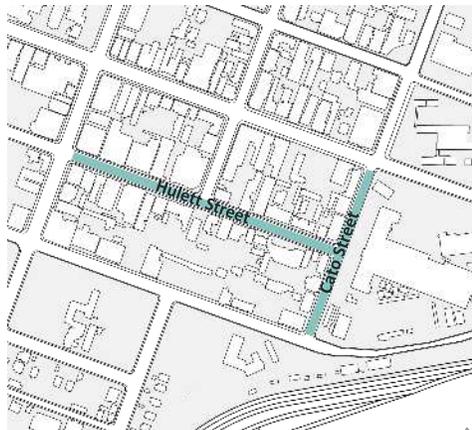


4.1.1 Movement + Circulation

Key Interventions: Pedestrian Street

With the taxi rank providing intense pedestrian and trader activity, transforming two blocks of Cato and Hulett Streets to pedestrian-only will better serve the large numbers of people who pass through KwaDukuza every day. Wider sidewalks and new shopfront can instigate more street level activity and commerce for the local economy.

A center median which acts as a bioswale responds to the need for stormwater management. The median will also hold covered trader stalls to give designated space to traders and shelter their products.

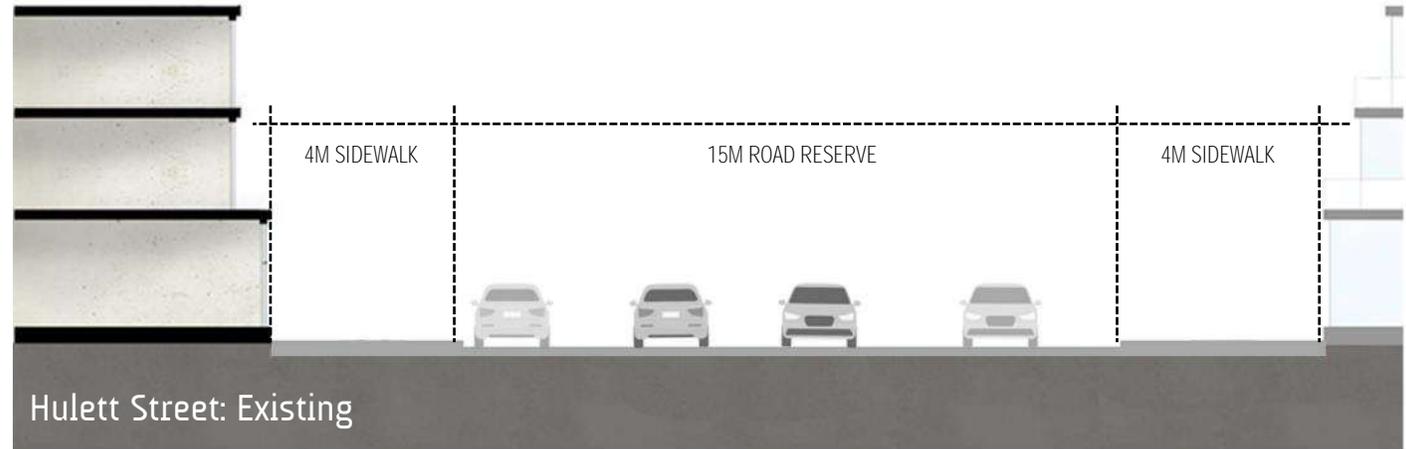
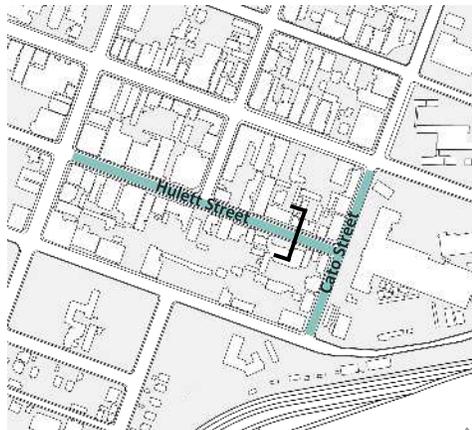


4.1.1 Movement + Circulation

Key Interventions: Pedestrian Street

Hulett Street has a 23 meter road reserve including sidewalks at 4 meters each. This leaves for two traffic lanes and ample room for street parking. Given this street is highly pedestrianized with many shops, there is a constant spillover on the sidewalks which puts people constantly in the way of vehicular traffic.

By extending the sidewalk onto the newly raised street, shops now have space for spillover and outdoor activity, such as café seating, while leaving the street to pedestrians. The center median with trader structures and planting provides opportunity for local commerce and landscaping. Shade trees and benches on the sidewalk enhance the public realm and give identity to the street.



4.1.2 Movement + Circulation

Key Interventions: Raised Intersections

With road reserves as wide as 25 meters, pedestrians cross as many as four traffic lanes at a time. By changing the material at the intersection and creating protected parking lanes, vehicular traffic slows and creates a safer environment for people crossing.

Street lighting, crosswalks, and security cameras also adds to pedestrian safety. These elements all put the priority on the pedestrian instead of the car.



4.1.3 Movement + Circulation

Key Interventions: CBD Bus Shuttle

To accommodate the high pedestrian traffic going from the taxi rank to the hospital and other points of interest, introducing a shuttle system will greatly benefit residents and visitors alike. Starting at the main transit hub with the taxi rank, bus and rail station, the shuttle is recommended to travel up Balcomb Street and turn on Chief Albert Luthuli Streets to make its way to the hospital.

This allows for easy access to social and civic spaces despite the steep terrain and gives a greater adhesiveness to the site.



4.2.0 Public Realm

Objectives

- Highlight historical heritage of KwaDukuza through public program and interventions.
- Establish a variety of public open spaces structured by an appropriate program and/or design.
- Increase wayfinding throughout and at entrances of the CBD.
- Increase pedestrian comfort by providing shade and street furniture on all major streets.

Proposals

- Transform two blocks of King Shaka Street into a Heritage Boulevard with building upgrades and street installations.



- Construct public market with facilities and storage over taxi rank.



- Create or upgrade public parks with appropriate program determined by context.



- Create center median with landscaping on pedestrianized streets.



- Introduce gateway sculptures or features at main access points of CBD.



4.2.1 Public Realm

Key Interventions: King Shaka Boulevard

With the CBD's rich history of King Shaka Zulu, KwaDukuza has a prime opportunity to highlight this heritage through a pedestrian experience. With art installations, public program, and upgraded urban spaces, these two blocks of King Shaka Street can become a tourism drawn and a symbol of pride for the CBD.



4.2.2 Public Realm

Key Interventions: Market

The taxi rank hold the highest amount of traders and informal shops. However with narrow sidewalks and no facilities or storage, this site needs a covered structure dedicated to traders for commerce and facilities such as running water and toilets.

The grade of the site provides a unique opportunity to put a structure over a portion of the taxi rank.



4.2.3 Public Realm

Key Interventions: Memorial Park

With very little existing public space, the municipality offices provide an opportunity for public open space and a memorial to highlight KwaDukuza and South Africa's resilient past. A seven-pillar sequential monument placed along an axis frames the space, with plenty of shade and seating.

Existing statues and monuments can stay in place and add to the story of the park. Pedestrian safety features such as crosswalks, bollards, and street lighting make the space safe for visitors at all times of the day.

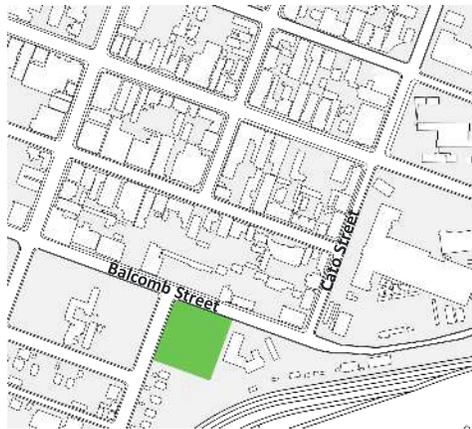


4.2.4 Public Realm

Key Interventions: Sports Precinct

Stanger South Secondary School brings many children from the taxi rank and other parts of the site. Providing a sports precinct near the school provides a safe place for recreation after school hours, as well as for other residents and visitors.

Widening and improving the sidewalks, adding crosswalks, and trees and lighting all provide better security for children going to either the school or sports facilities.



4.2.5 Public Realm

Key Interventions: Recreational Park

The green space on the southern edge of the site is already deemed a public open space, but currently holds no program. By incorporating a running track, playgrounds, and outdoor gyms, this area can become a recreational park, drawing residents from all parts of the municipality. Tree lined streets act as a barrier to the light industrial property to the east of the park.



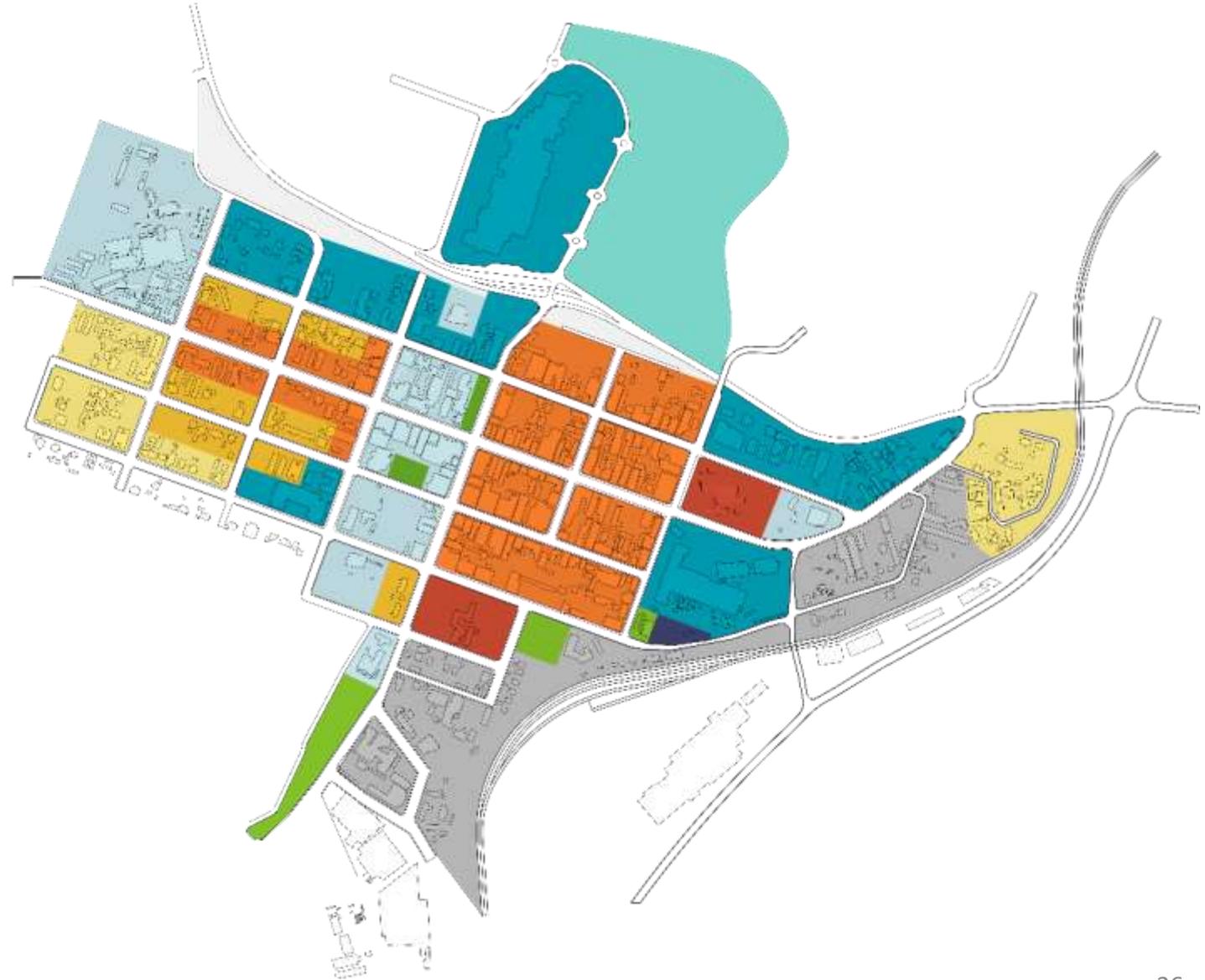
4.3.0 Activity Structure

Objectives

- Establish civic precinct to hold municipality-based program.
- Address Land Use Management scheme to create opportunity for future development.
- Reassess parking strategy to consolidate under/overutilized space.
- Encourage mixed use development for a vibrant urban environment.
- Increase density through residential infill and new development.

Proposed Land Uses

- Mixed Use Residential / Retail
- Business Park / Light Industry
- Retail / Commercial
- Civic / Cultural
- Education
- Transportation
- Industrial
- Residential High Density
- Residential Medium Density
- Public Space



4.3.0 Activity Structure

Proposals

- Landbank select buildings surrounding existing municipal offices for a consolidated municipality precinct.



- Transform building programs along new King Shaka Heritage Boulevard to programs which highlight historical relevance.



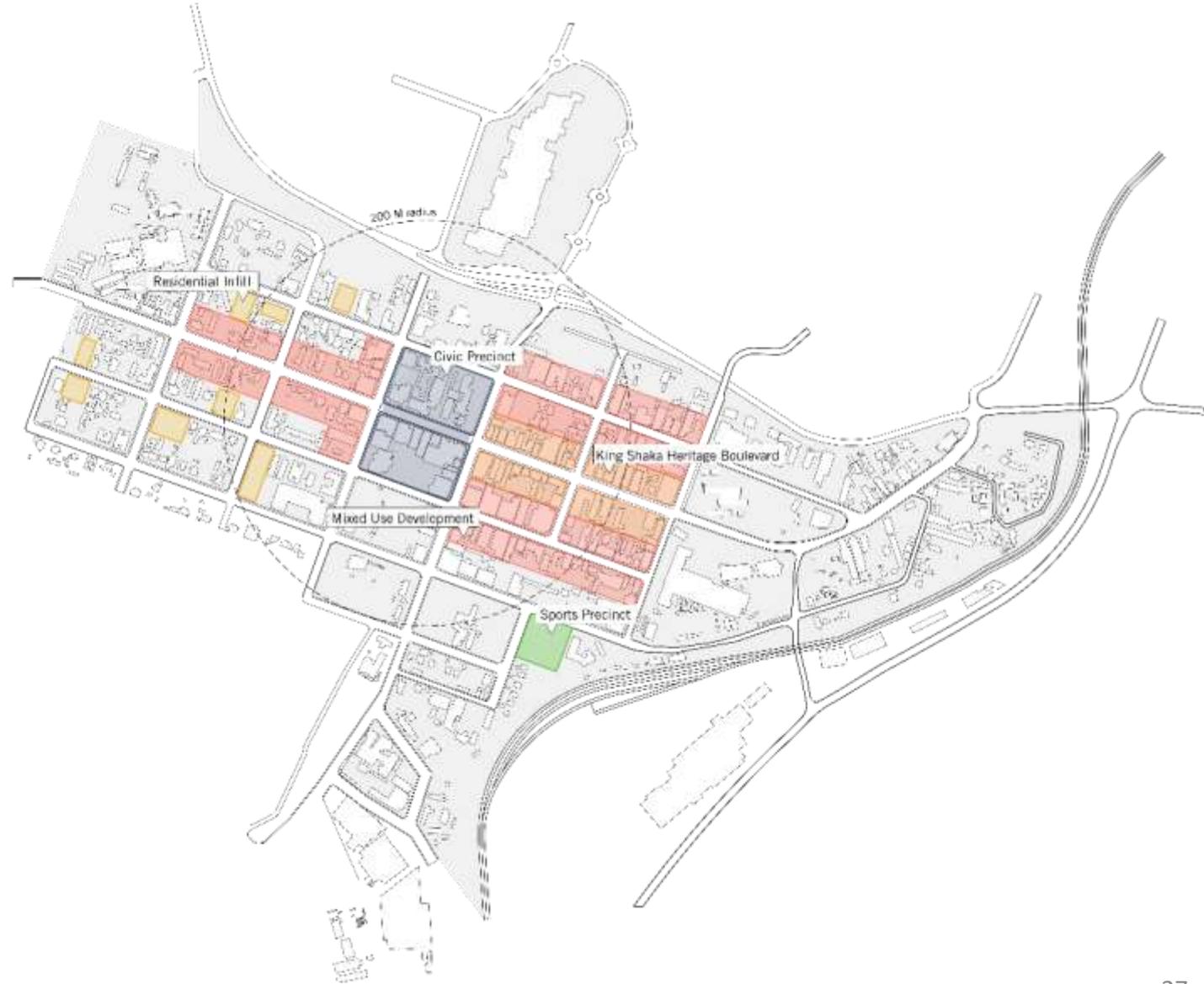
- Incentivize mixed-use residential / retail / office in CBD core to increase density.



- Development vacant properties into multi family housing.



- Convert land marked from light industrial to recreation space for sports precinct.



4.3.1 Activity Structure

Key Interventions: Civic Square

By merging the municipality programs into one super block, a civic precinct becomes an urban space as well as an urban function. With bollards at either end, King Shaka is closed to vehicular traffic and becomes a pleasant pedestrian space with shade, seating, and a functional bioswale. The memorial park is a front porch to the municipality office, and a park on the opposite block repurposes the existing parking lot and provides another public space and an entrance to civic functions.

Vehicular traffic can easily wrap around the precinct, with parking space and structures available on site. This keeps the priority on the pedestrian and calms the speed of motor vehicles.



4.4.0 Built Form

Objectives

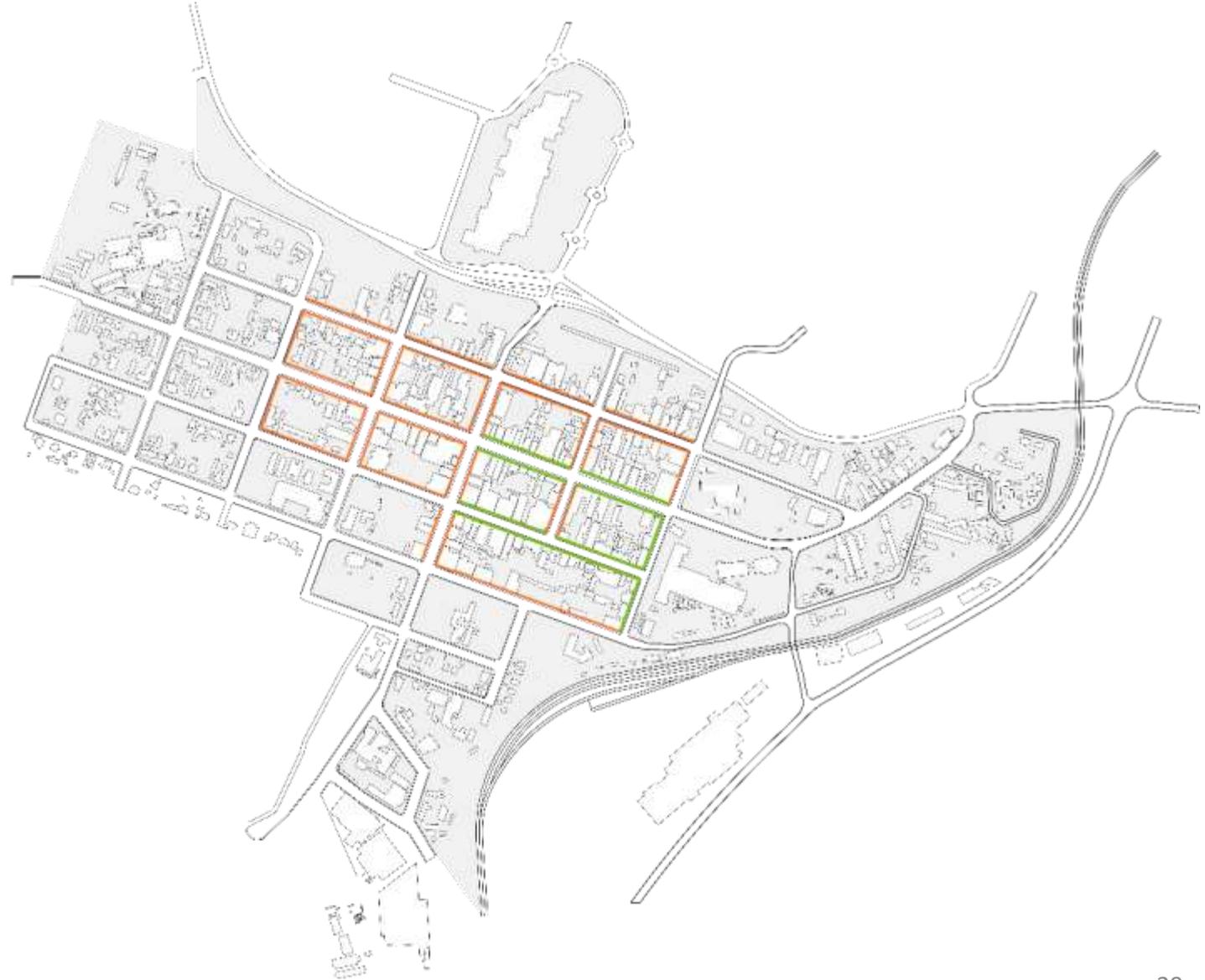
- Encourage lively streetscapes with active building bases facing primary boulevards.
- Promote vertical street activity with dynamic building facades.
- Utilize built form to align with KDM Green Design Manual to promote architectural sustainability and responsible design.
- Increase density through residential infill and new development.

Proposals

- Upgrade buildings facing newly pedestrianized streets and King Shaka Heritage Boulevard.

- Upgrade existing commercial and mixed-use blocks

- Form green design committee to address existing and new building standards.



4.4.1 Built Form



4.5 Project Phasing

Project Phase 1

① Memorial Park

- 7 Pillar Memorial
- New paving, public seating, and planting
- Raise Chief Albert Luthuli Street and coinciding intersections with new crosswalks



4.5 Project Phasing

Project Phase 2

Memorial Park

② Civic Precinct

- Reprogram existing buildings to hold municipality functions
- Create center medium with shade trees and bioswale for stormwater drainage
- Municipality park with paving, planting, and lighting
- Street trees and lighting for shade and security



4.5 Project Phasing

Project Phase 3

Memorial Park

Civic Precinct

③ Pedestrianization of Hulett and Cato Streets

- New paving material for street and coinciding intersections with crosswalks
- Widen and improve sidewalks for shop spillover
- Create center medium with trader structure and bioswale for stormwater drainage
- Upgrade shopfront for new commercial activity



4.5 Project Phasing

Project Phase 4

Memorial Park

Civic Precinct

Pedestrianization of Hulett and Cato Streets

4 Market Square + Raised Intersections

- Construct structural pad on column support over portion of taxi rank with an open, covered structure for market
- Incorporate indoor facilities and allow for running water within the covered market
- Provide safe vertical circulation from taxi rank to market space on upper level
- Improve remaining intersections with new material, crosswalks, and signage



4.5 Project Phasing

Project Phase 5

Memorial Park

Civic Precinct

Pedestrianization of Hulett and Cato Streets

Market Square + Raised Intersections

5 CBD Bus Shuttle + Stops

- CBD bus shuttle begins at existing taxi rank near the Stanger train station and follows Balcomb up to Chief Albert Luthuli and Gizenza Streets and then Mahatma Gandhi and King Shaka Streets to the hospital
- Stops should include seating, shade, and lighting for user comfort



4.5 Project Phasing

Project Phase 6

Memorial Park

Civic Precinct

Pedestrianization of Hulett and Cato Streets

Market Square + Raised Intersections

CBD Bus Shuttle + Stations

⑥ King Shaka Boulevard

- Widening and upgrading sidewalks to limit vehicular traffic to two lanes only and increasing sidewalk width to six meters
- Demarcate space for public art and installations pertaining to King Shaka heritage
- Upgrade King Shaka Memorial and Museum
- Transform shopfront to hold heritage-related program and/or commercial activity
- Incorporate street trees, seating, and lighting for pedestrian comfort



4.5 Project Phasing

Project Phase 7

Memorial Park

Civic Precinct

Pedestrianization of Hulett and Cato Streets

Market Square + Raised Intersections

CBD Bus Shuttle + Stations

King Shaka Boulevard

7 Sports Precinct

- Construct youth-sized football field and neighboring tennis courts on plaza
- Facilities building for administration and storage purposes
- Incorporate street trees, seating, and lighting for pedestrian comfort



4.5 Project Phasing

Overall Framework Plan

- 1 Memorial Park
- 2 Civic Precinct
- 3 Pedestrianization of Hulett and Cato Streets
- 4 Market Square + Raised Intersections
- 5 CBD Bus Shuttle + Stations
- 6 King Shaka Boulevard
- 7 Sports Precinct



01 Planning Tools



02 Financial Tools



03 Investment Tools



04 Urban Management Tools



05 Promotional Tools

Strategic Planning

- Provincial, District, and Municipal Departments ensure KwaDukuza CBD is afforded appropriate attention in long term.

Scheme Amendments

- Scheme is amended to act as facilitator of development allowing for greater level of flexibility.

Urban Design

- Strategic urban design and landscaping plans should be developed and applied.

Rates Rebates / Abatements

- A multi-year rebate on the value of any improvements contributing to an increase in property values should be provided to property owners.

Special Rating Areas

- SRAs Can be established if at least 51% of commercial landowners or 66% of residential landowners is involved.

Co-Funding from Council

- Used to support public realm enhancements.

Trade Offs

- Scheme amendments for pedestrian and public space upgrades

Acquisition of Properties

- The municipality acquires strategic properties for substantial planning flexibility.

Public Private Sector Investments

- Specific opportunities for the establishing of PPPs should be identified and packaged.

Management Capacity

- A position responsible for managing the urban environments and engaging with local stakeholders and supporting tools listed.

Business Improvement Districts

- Grant funds acquired by the municipality for special programs and/or incentives such as tax abatements can assist businesses or to recruit new business.

Marketing

- The CBD needs to be marketed as an investment destination and a prominent activity node.

Business and Property Development Incentives

- Incentives such as rate reductions, reductions in servicing costs and others can be used in future as an approach to attracting specific types of businesses to the area.

Facilities Provision

- Providing appropriate public facilities in the node will ensure that people continue to be attracted to the node.