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CITY STREET4

STREETS FOR 2030
PROPOSING STREETS FOR INTEGRATED AND UNIVERSAL MOBILITY

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NEW CENTRALITIES FOR INTEGRATED AND UNIVERSAL MOBILITY IN LATIN AMERICA

INTEGRATED AND UNIVERSAL MOBILITY

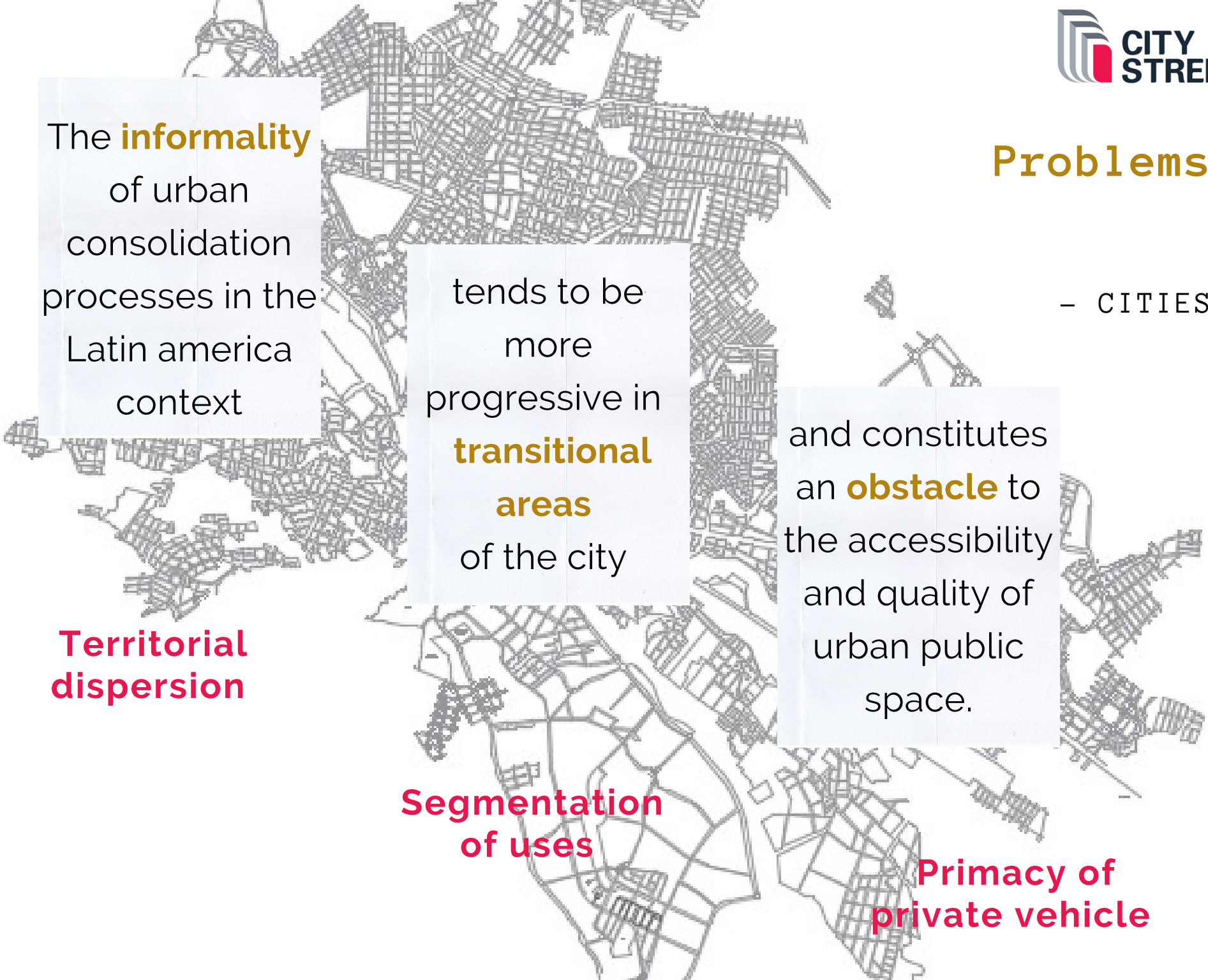
The urgent need to rethink a paradigm of urbanism to revalue the urban centrality to **reconnect with the city** through **sustainable mobility**, where socioeconomic, spatial, formal, and accesibility factors can highlight the **multiple benefits** that process of transformation from the first urban cell, the centre.

OBJECTIVE

To present a case study of Tarija, Bolivia with "widening sidewalks in the historical centre of the city" and to reformulated a concept to **Integral Mobility** into centralities.

Problems

– CITIES



The **informality** of urban consolidation processes in the Latin america context

tends to be more progressive in **transitional areas** of the city

and constitutes an **obstacle** to the accessibility and quality of urban public space.

Territorial dispersion

Segmentation of uses

Primacy of private vehicle

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How is addressed of these problems in Latin America?

A proposal solution to attend the citizen perception and integrated continuous improvement process...

In **Mexico** a study of habitability conditions of public spaces in the historical centre of Toluca about pedestrian **accessibility, connectivity, safety** and **environmental noise** are the main factors. Where 82% of the streets are walkable but **90.3%** of adults over 60 years of age **perceive insecurity and noisy spaces.** (Alvarado, 2017)

The **sensory experience** of a blind person in the centre of Mexico shows that the sensitive aspects of the journey as the orientation, textures, smells and sounds justifies the importance of **design in space** and must be inclusive. (Aguilar, 2020)

In Bogotá, **Colombia** the Land Urban Plan-LUP was revised on a regional scale was create 22 urban centralities located **in peripheries** for urban decentralization and to boost the **economy and private investment** and to root the sense of territorial equity (Beuf, 2016)

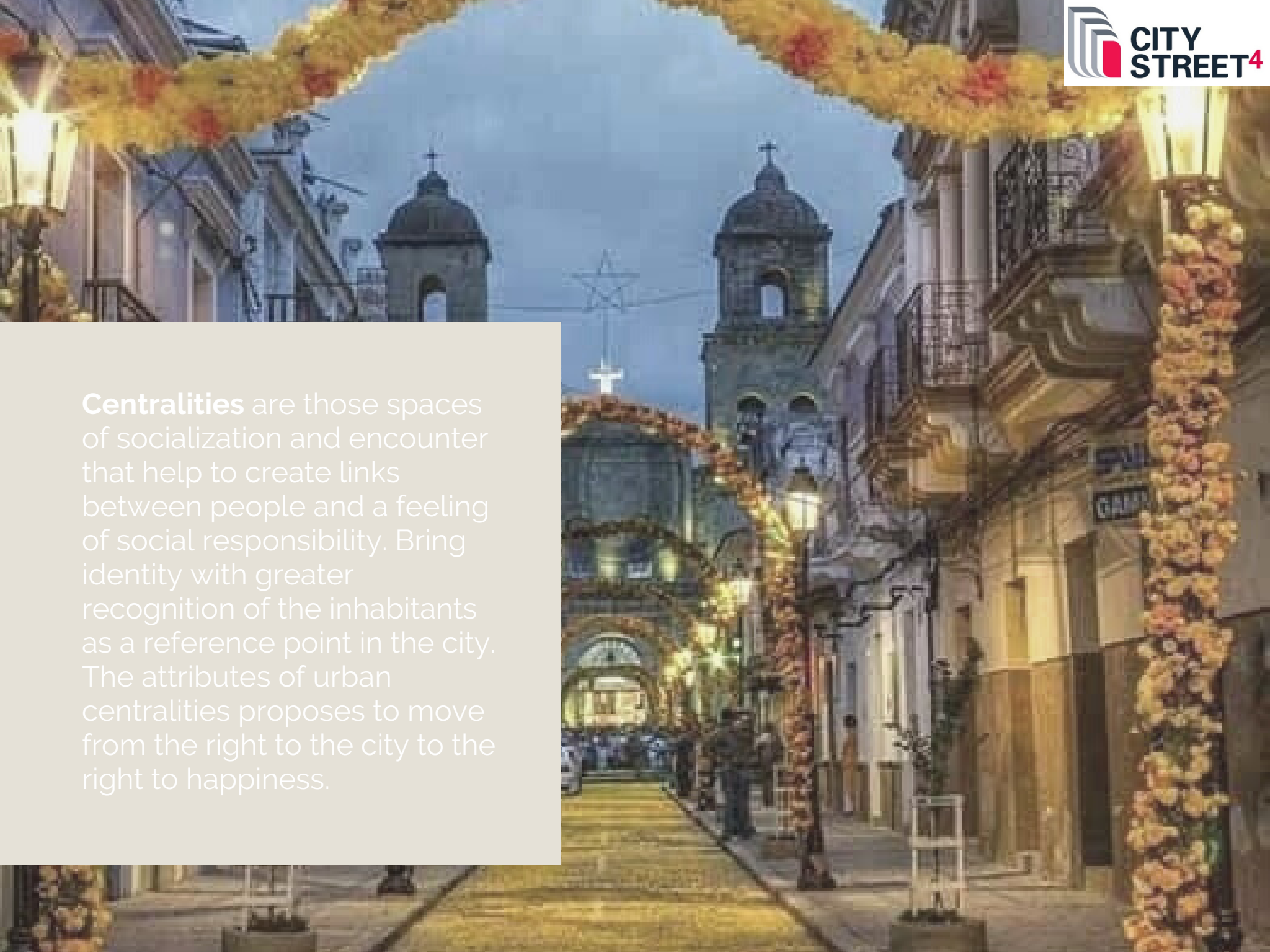
Urban Centralities Program on Sao Paulo, **Brazil** focused in **landscape and environmental** project acquires an important **symbolic value** articulated to the city (Oliveira, 2005)

Walkability is guaranteed by three essential conditions: **safety, attractiveness and confort**. (Barbosa, 2016)

In **Bolivia** the floating population is in transition called **multilocality.** (Antequera, 2011) The case study is about the centre of Tarija.

CONTEXT IN LATIN AMERICA

Depopulation in almost all centralities of Latin American cities, the rate amounts is around 3% (Carrión, 2011)



Centralities are those spaces of socialization and encounter that help to create links between people and a feeling of social responsibility. Bring identity with greater recognition of the inhabitants as a reference point in the city. The attributes of urban centralities proposes to move from the right to the city to the right to happiness.

Tarija, Bolivia

SIDEWALKS IN THE CENTRE

The city of Tarija has **268,400 inhabitants** over an area of 2.638km2 and 1834m above sea level, extends from north to south following the axis of the Guadalquivir River. The center of the city is the spanish typical colonial checkboard with streets between 8 to 12 m.

SOCIAL AND ENVIRONMENTAL CONTEXT

The municipality of Tarija is facing a serious environmental problem with **air pollution** due to the increase in the number of vehicles, a situation that is **suffocating the arteries of the city** centre, which concentrates informal commercial, institutional and service activities and where **urban transports** currently operate and other **privates vehicles circulate** (taxis, individuals).

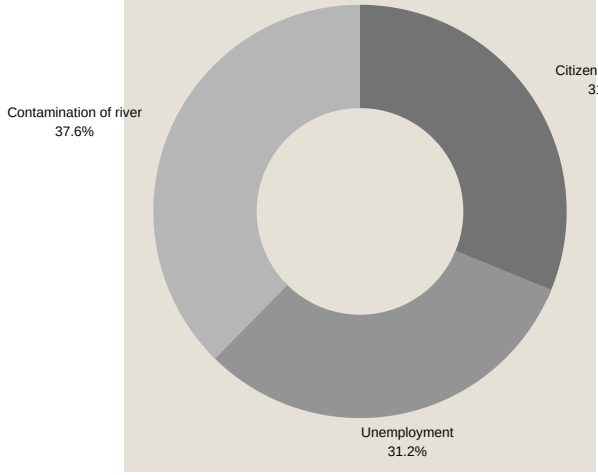
"MONICA" NETWORK (AIR QUALITY MONITORING)

In 2014 the first Municipal Air Quality Report for Tarija became available. The result of active sampling establishes **concentration levels of PM10** (24-hour average), measured between January and December in two sites, Bolívar Park of 69.4 $\mu g/m^3$ and Sucre Square of 65.2 $\mu g/m^3$, which **in both cases exceeds the annual limit value** of 50 $\mu g/m^3$ set by the Bolivian Law for Environment (No. 1333).

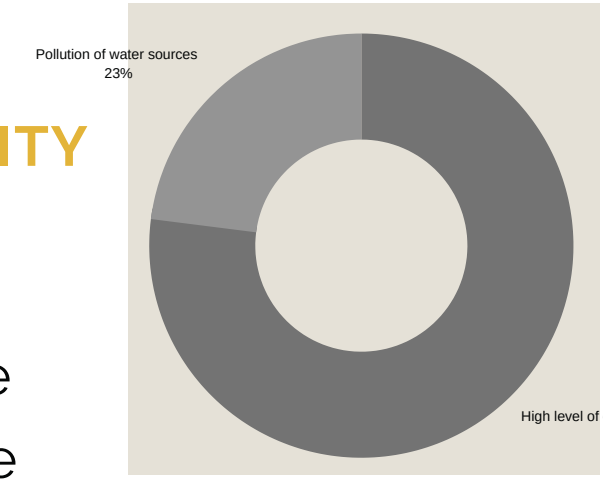
Citizen perception

TO EVALUATE THE REALITY

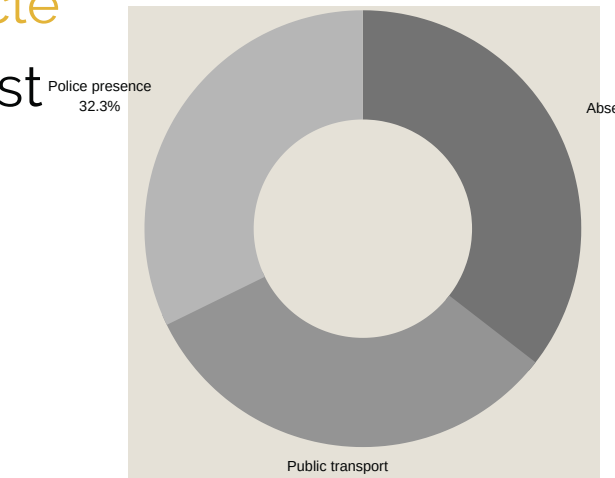
The most demanded institutional actions are the reforestation of streets, the promotion the use of bicycle and the taxation of the most polluting vehicles.



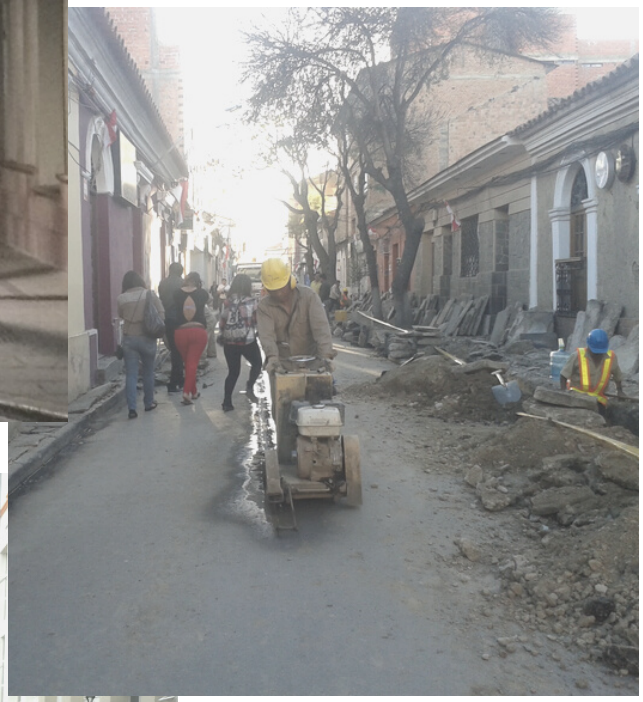
Greatest problem in the city
Contamination of river (35.6%)
Unemployment (29.8%)
Citizen insecurity (29.6%)
(Cieplane, **2019**)



Environmental and pollution
Atmospheric pollution (77%)
Pollution of water sources (23%)
(Cie-UPDS, **2019**)



Citizen problems on neighbourhoods
Absence of parks and green areas (22.2%)
Service of public transport (20.8%)
Lack of police forces (19.9%)
(Cie-UPDS, **2018**)



PROJECT EXECUTED

The widening of sidewalks in the historical centre of the city, promotes two fundamental changes in the urban context: a **policy of sustainable urban mobility** that prioritizes pedestrians and cyclists, and a plan to **revalue the urban heart of the city** where the cultural heritage is preserved.

Architectural Heritage

Share road

No sidewalk

local material "laja" stone

Pedestrian zone (2phase)

THE STARTING POINT

Accesibility

Semi-pedestrian (1phase)

CONSIDER THAT

The urban sidewalk **itself** is nothing.

- infrastructure **project**

WE MUST

Take advantage of its **potential** for citizens and environment

- urban mobility **process**

MONUMENTAL HERITAGE AREA

Preservation of historial buildings

Must be understood in a holistic way.

SEMI-PEDESTRIAN CIRCUIT

Move by Bicycle

"Living the city" and as a strategy of urban animation.

URBAN CENTRALITIES NETWORK

New centralities

Integrating and replicated in other areas of the city.

NEW CENTRALITY CENTRE + MOBILITY			
PLANIFICATION	Centralities network	Pedestrian /Bicycle Priority	
	Apple hearts	Phases to pedestrianize	
	Land use and occupation	Shared and complete streets	
	Articulate squares or green areas	Public bike and micro mobility/VMP	
	Hydrant networks	Integration of cycle path networks (transport, recreational, shared)	PLANIFICATION
	WIFI public space	Transportation Oriented Development – DOT	
	Information points	Integrated Public Transportation System	
CIVIC CULTURE	Tree/ Monument/ Bird Identification	Driver training	
	Architectural culture	Urban educators	
	Urban animation	EcoBici (bicycle school)	VIAL EDUCATION
	Citizen security/Social trust	Close traffic in downtown on Sundays	
	Cleaning	Traffic control	
INFRAESTRUCTURE	Improve lighting	Public transport stops	
	Public decoration/Street furniture (benches, posts)	Bike parking (public – private)	
	Improve facades	Vehicle parking	
	Underground telephone network	Traffic lights (intelligent monitoring)	
	Maintenance Attractors (museums, churches)	Illumination	
	Storm drainage networks	Stable, unobstructed surfaces	INFRAESTRUCTURE
	Newspaper kiosks	Horizontal marking of bike boxes	
DESIGN	Public space	Pompeiians	
	Urban image/Urban imaginary	Physical dividers / Area demarcation	
	Landscape architecture	Bollards / Use of local materials	
HERITAGE	Workshops schools	Wayfinding	
	Preserve heritage houses	Accessibility to attractors (market, library)	
SOCIAL	Quality of life index	Tactical urbanism	
	Identity	Parklets / Terraces	DESIGN
	Collective memory	Animated sidewalks	
	Coexistence	Urban art	
	Music on the streets	Universal accessibility (for all people)	ACCESIBILI
	Traditions/crafts cultural	Touch tile	
ECONOMIC	Capital gain	Street visibility	
	Night dynamics	30km/h zone	
	Fairs and promotional activities	Vehicle restriction	
	Shops, book club, cultural centre	Safe intersections	ROAD SAFETY
	Circuits (historical, gastronomic, religious)	Vertical / Horizontal signage	
TOURISM	Cataloguing urban landscape units	Regular vehicle ramps / Slopes	
	Freelance local tourism	Recreational bicycles	
	Guided walks	Delivery / Services	ECONOMIC
	Creative advertising	Tourist circuits	
	Illuminated night art	Bike maintenance (bicycle shops, stores)	
ENVIRONMENTAL	Green infrastructure	Urban trees / Landscape	
	Recover green areas	Less visual contamination	
	Thermal comfort	Less air pollution	
	Native woodland, rain gardens, flower pots	Less noise pollution	
	Collective orchards	Less direct insolation	
	Carbon footprint calculator	Less wind speed	ENVIRONMENTAL
	Clean air	Improves physical and mental health – Sensory experience	
GOVERNANCE	Incentives	Financing and execution of Mobility plan	
	New offer of micro-companies	Transportation to work plans	
	Soil created/High-rise buildings	Access to bicycles (More bike for everyone)	
	Compensation certificates	Incentive to pedal and walk	
	Adequate burden sharing and benefits	Regulate informal service trade, transportation and Laws	GOVERNANCE

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New centralities

SUSTAINABLE STRATEGY

Centre + Mobility

Revitalize Active

The executed project (widening sidewalks in Tarija) represents **only 13%** of the **components in the New Centrality** with a Integral Mobility approach.

Attribute categories

Centre

PLANIFICATION

INFRASTRUCTURE
DESIGN
GOVERNANCE
ECONOMIC

CIVIC CULTURE

SOCIAL
ENVIRONMENTAL
TOURISM
ARCHITECTURAL HERITAGE

Mobility

VIAL EDUCATION

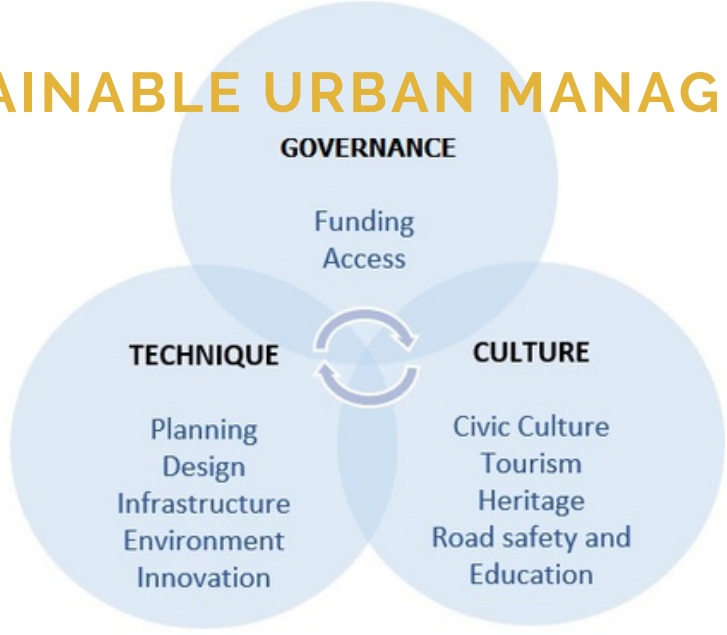
ACCESIBILITY
ROAD SAFETY
ENVIRONMENTAL
INFRASTRUCTURE

GOVERNANCE

PLANIFICATION
ECONOMIC
REGULATION
COMUNICATION

It can be possible with

SUSTAINABLE URBAN MANAGEMENT



TECHNIQUE

Planning
Design
Infrastructure
Environment
Innovation

GOVERNANCE

Funding
Access

CULTURE

Civic Culture
Tourism
Heritage
Road Safety
Vial Education

Conclusions

New urban centres reconnect the city and guarantee its accessibility in their relationships and transactions.

Integrate the pedestrian as the objective of urban quality.

A new centrality implemented in the city constitute the first action of social equity to enables the positive impacts on human development and social production of the habitat.

Nothing in urban management is unilateral.

Centralities must be adapted to the characteristics of the place, acquires its own identity and must be articulated in a network.

Developing **new centralities in the city** helps to organize the informality of urban consolidation, promotes and improves accessibility, interconnection is a central issue, it is an imperative need to collaborate with the health and welfare of citizens, so required and fundamental today for the postpandemic time and tomorrow for climate change.

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