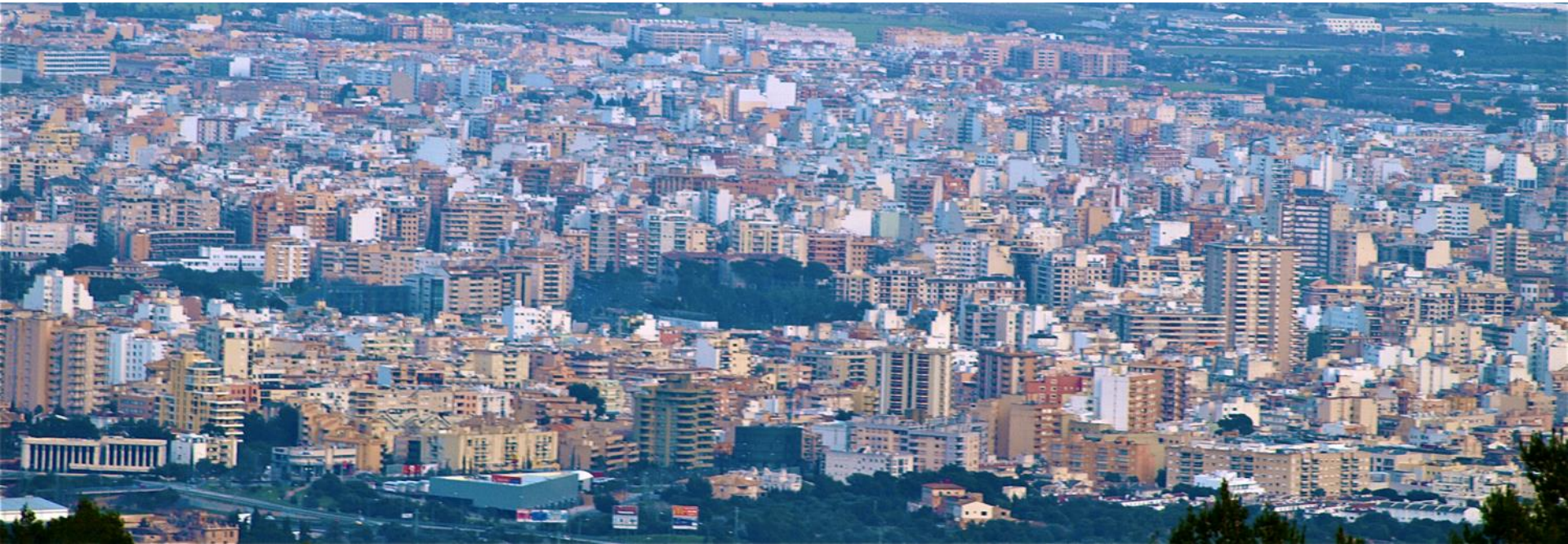


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La Gestión y Planificación de la Expansión Urbana

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1 Contexto, Situación Y Aproximaciones

El Desarrollo no planeado

1. Base Financiera local inadecuada

2. Informalidad, falta de registro de la propiedad,

3. Aumento de la desigualdad y reducción de los impuestos y recaudación

4. Recaudación endémicamente baja.

Efectos y Impactos de la urbanización informal

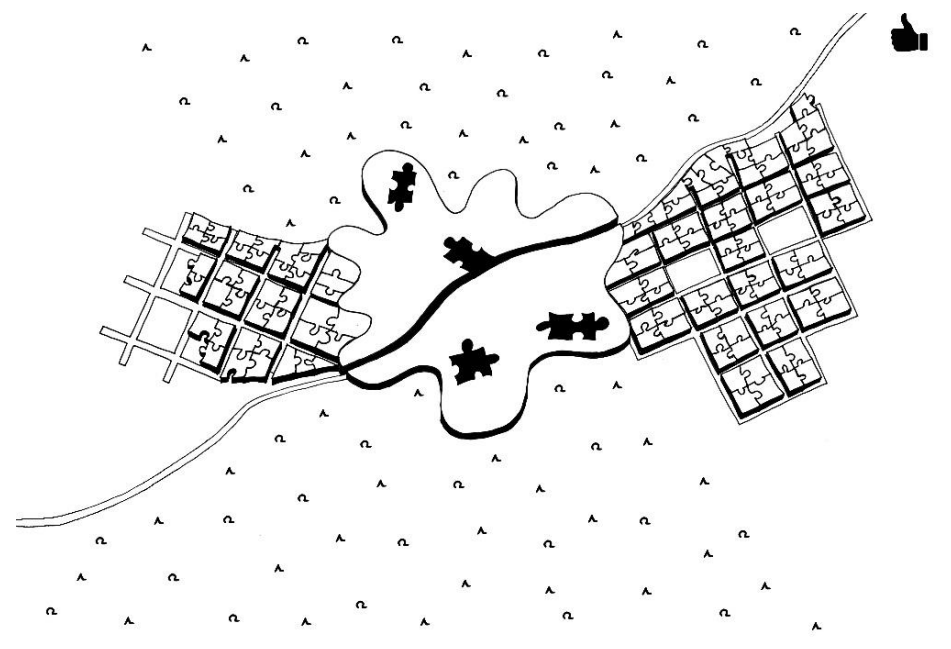
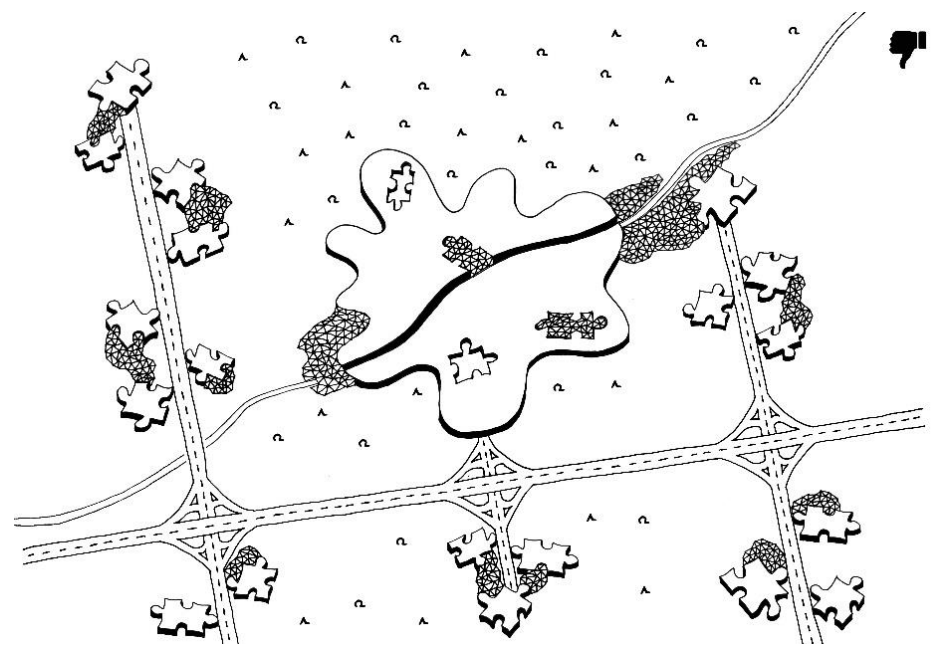
1. Pérdida de económica
2. Pérdida de los beneficios de la aglomeración
3. Segregación socio-especial
4. Movilidad y transporte deterioran
5. Pérdida del acceso a la energía
6. Problemas de varias ordines

Que necesitamos hacer?

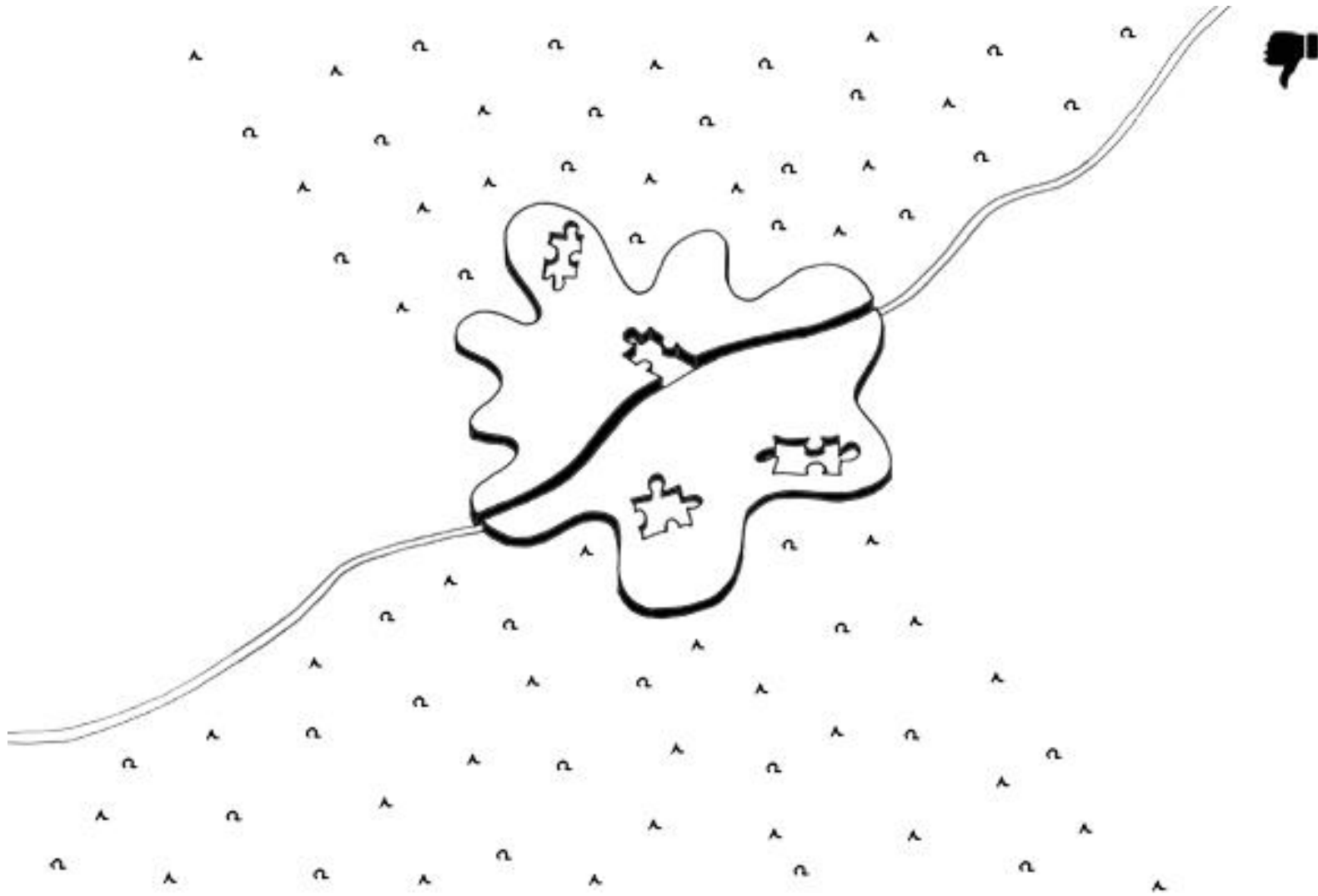
El desarrollo social y economic solamente pueden suceder si logramos **la oferta de suelo y la garantia de expansion urbana planeamento**



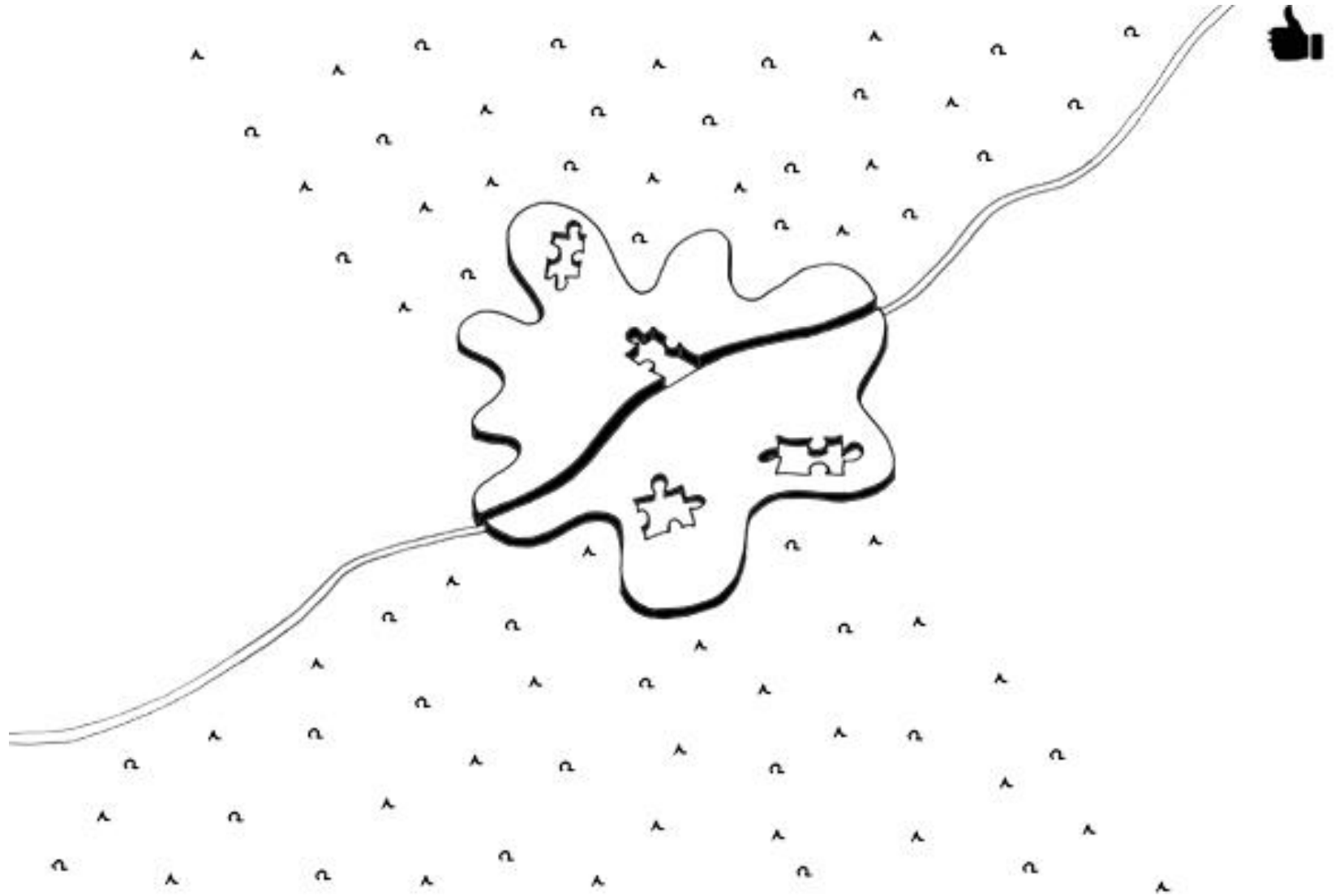
Formas Sustentable y Non-Sustentables de Expansion Urbana



Crecimiento non-Sustentable



Crecimiento Sustentable



Planificar la Expansión Urbana

1. La PLANIFICACION Y URBANISMO: **suelo urbano suficiente y a precios asequibles.**
2. EXPANSION URBANA: **áreas delineadas por un plan estructural regulando la expansión.**

Expansion Urbana Planeada (PCE)

1. planear en **anticipación**
2. Planear en **la escala** para responder a la expectativa de crecimiento;
3. Planear por **fases**
4. Planear por **contigüidad**
5. Adoptar **el uso eficiente y sustentable de los recursos** y ecosistemas y
6. Promover un Sistema de ciudades an nivele nacional.

Porque Planer la Expansion Urbana

1. Definir la estructura de la ciudad y su estructura de crecimiento
2. Ofrecer el espacio para que los asentamientos funcionen bien y con la oferta de espacio de convivencia publico.
3. Facilitar el acceso a suelo urbanizado por parte de la poblacion
4. Reduzir costos de los servicios publicos y establecer conectividad con la ciudad exisitiendo si
5. Crear la basis para la ciudad compacta, conectada, integrada, inclusive y resiliente.



Stand Alone Goal On Cities – Goal 11 “Make cities and human settlements inclusive, safe, resilient and sustainable”

An aerial photograph of a city, likely Mexico City, showing a mix of modern and traditional architecture, a busy street with traffic, and a large green park area. A large white number '2' is overlaid on the left side of the image.

2

The Three-Pronged Approach – 3PA

Una Política Integrada y Holística de Desarrollo Urbano Sustentable

COORDINACION



INTEGRACION

regulaciones



Diseno
Urbano

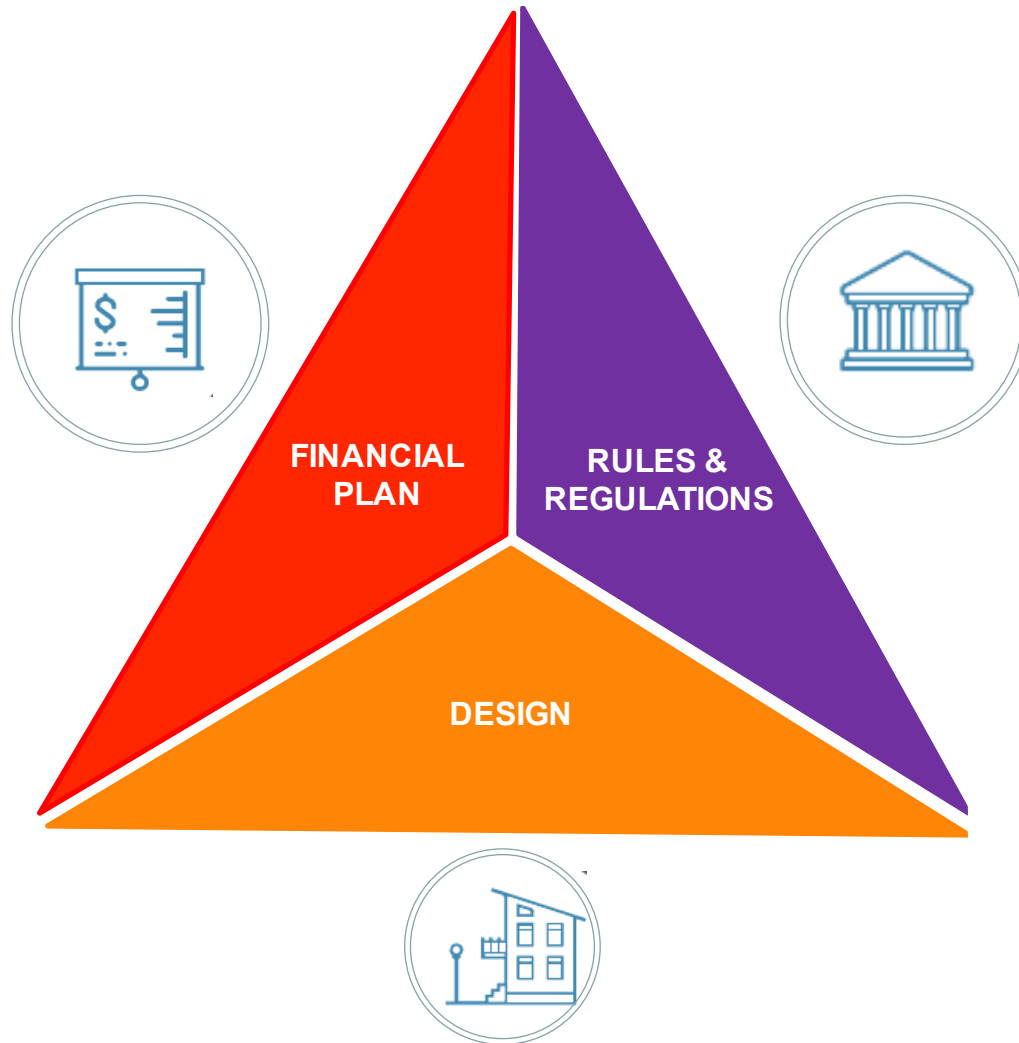


Plan
Financiero

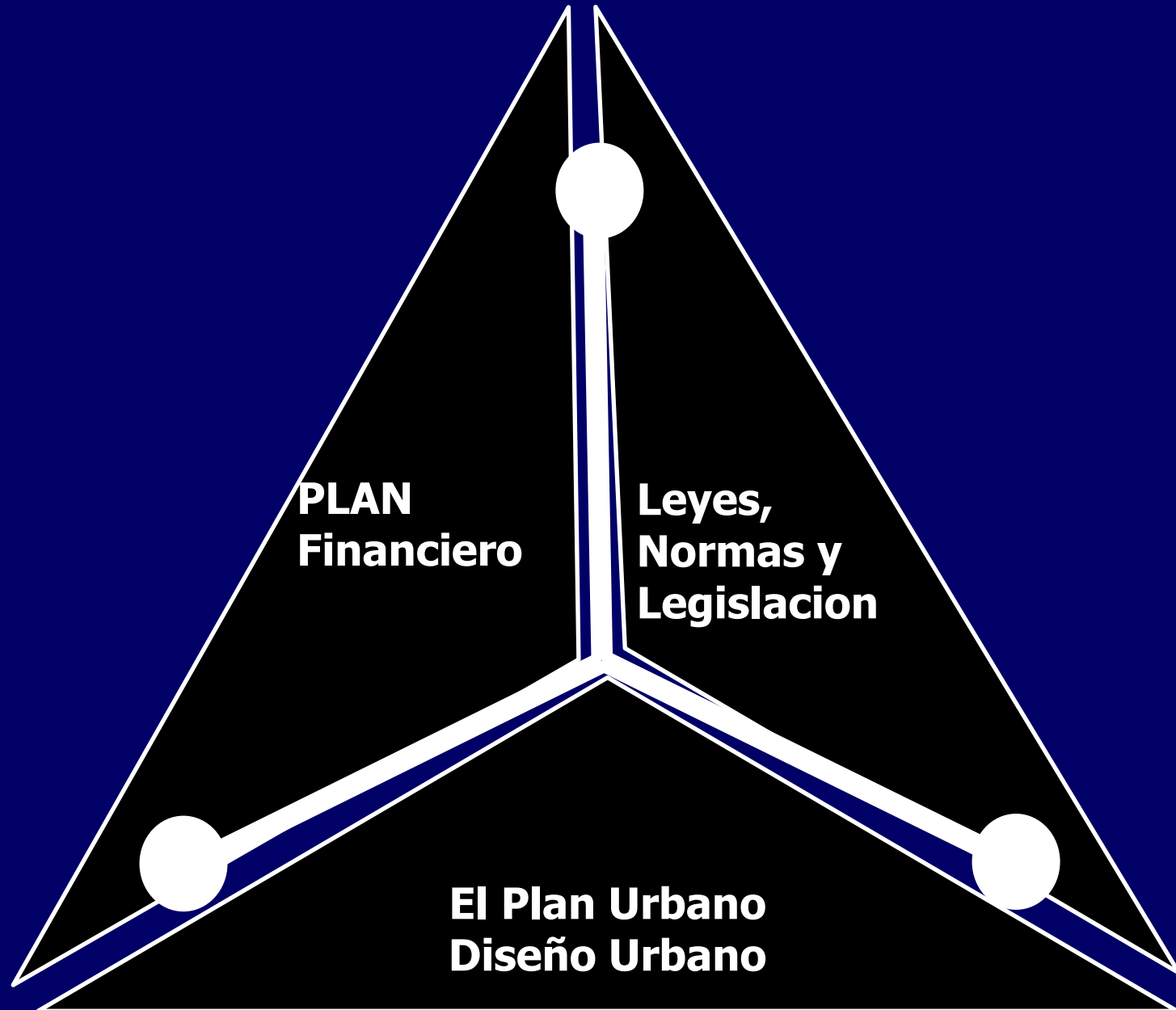


La estrategia 3PA integra el **diseño**, **financiero**, y **plan legal**.

The 3PA Approach

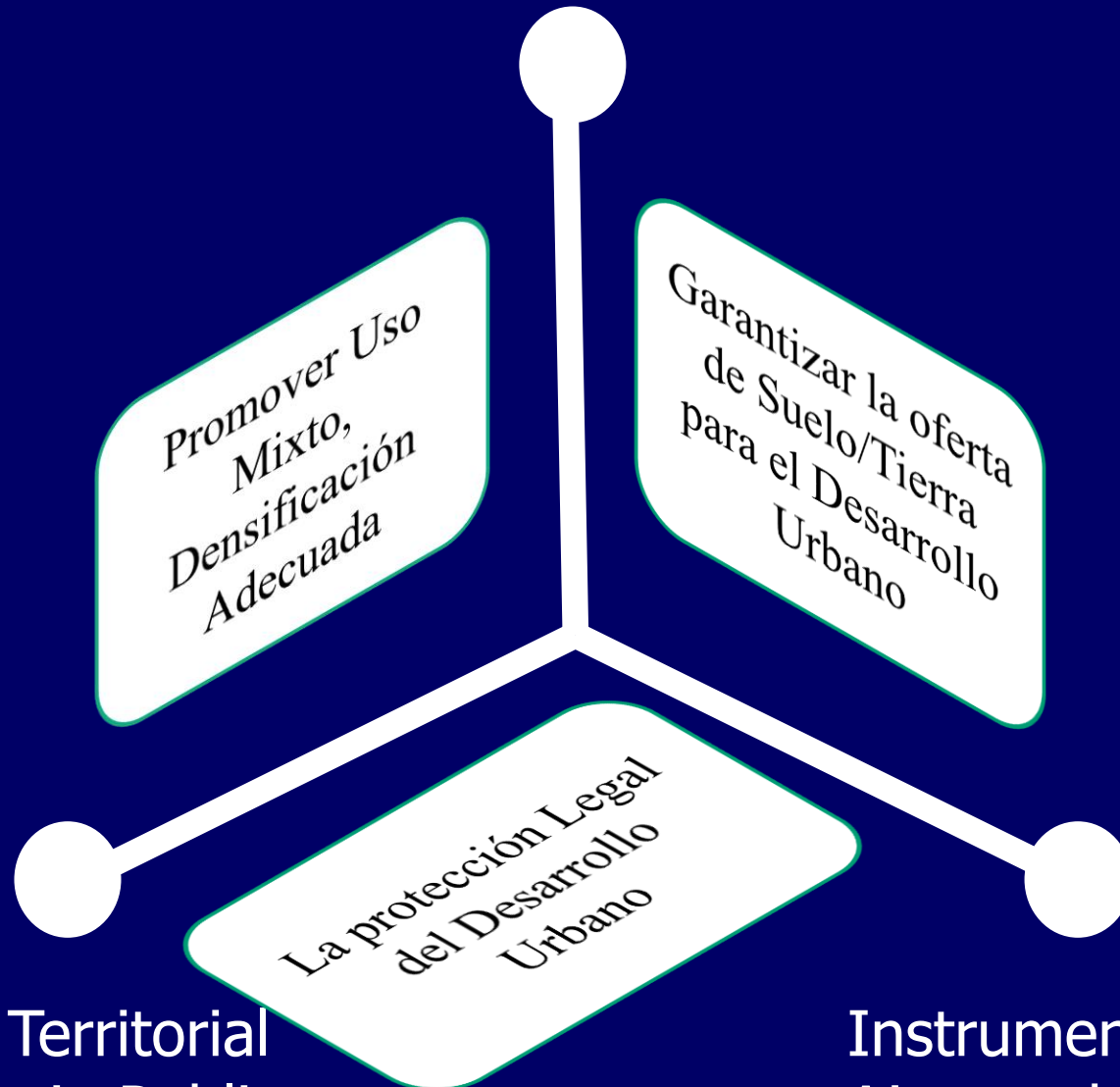


La Urbanización Sustentable Planeada



Gestión del Suelo / tierra urbana

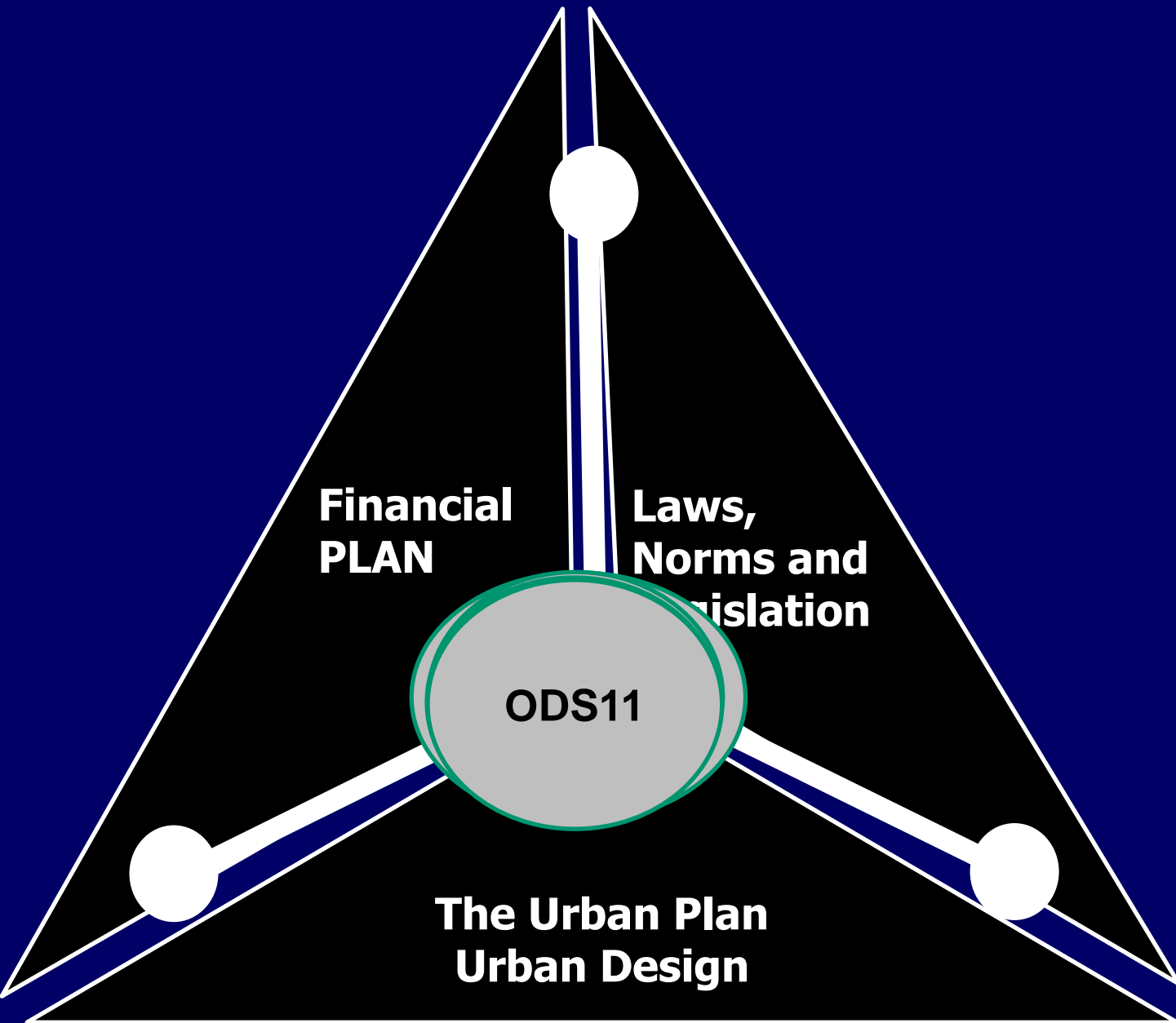
Captura de Plus Valia / Compartir Valor



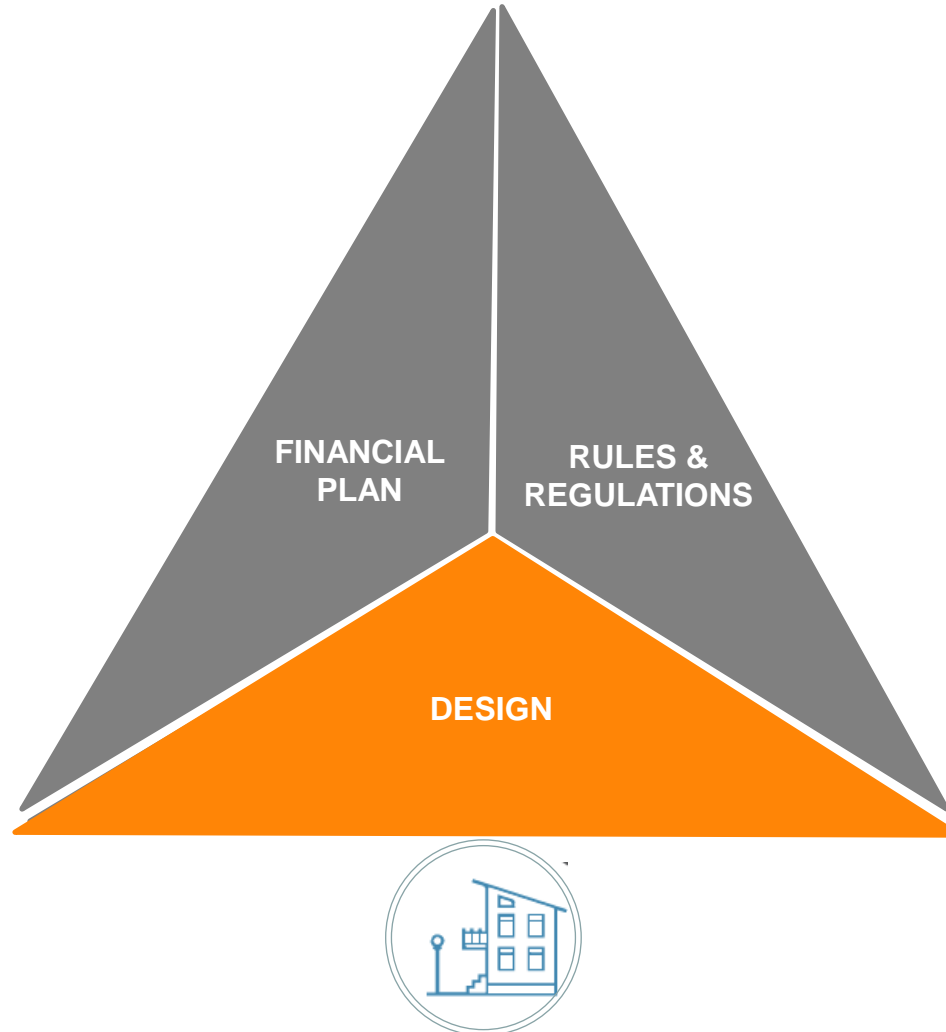
Planificación Territorial
Calles & Espacio Publico

Instrumentos Legales
Ajustes de Tierra

La Urbanización Sustentable Planeada



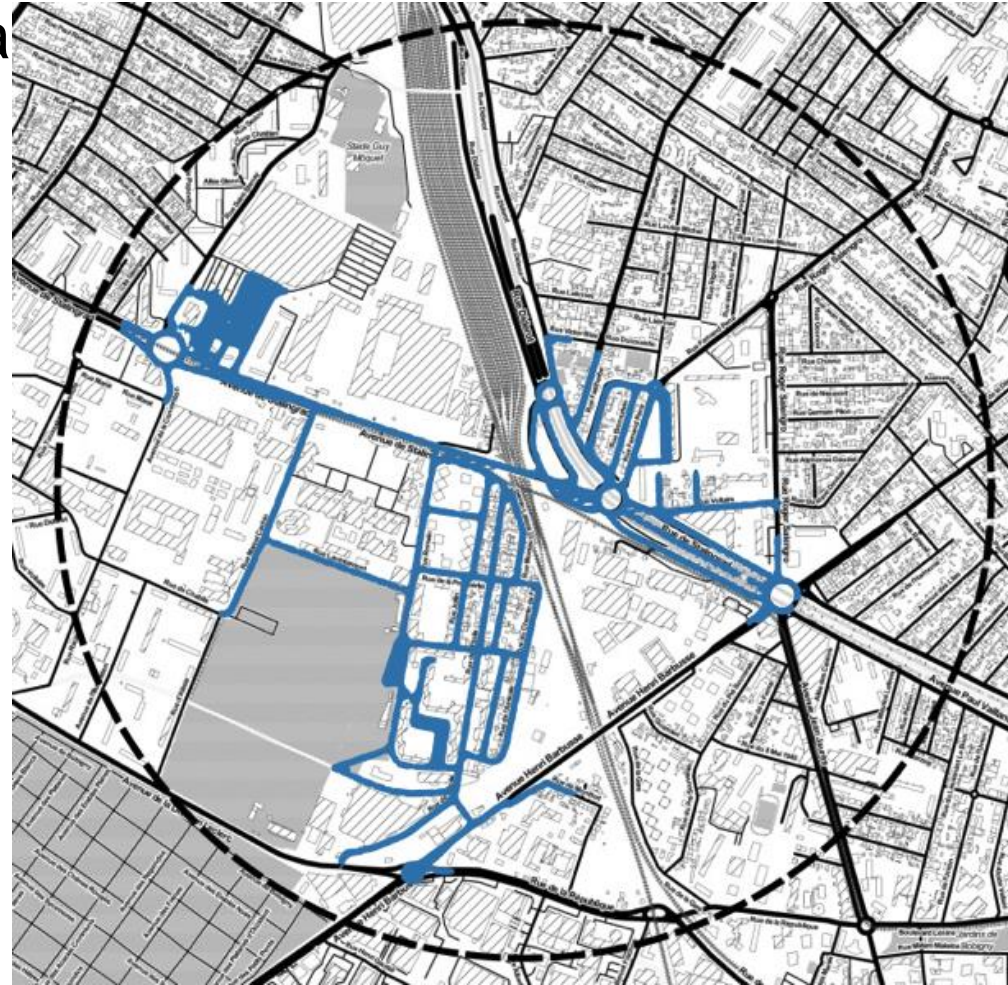
3PA – Design



Planeamiento y Diseño



- 1) Espacio adecuado para calles y red de calles eficientes
- 2) Densidad adecuada
- 3) Uso Mixto
- 4) Mixto Social
- 5) Especialización de uso de suelo limitada



The Planning & Design Principles



Densidad y Compactacion

Concentracion de personas y negocios



Densidad de 150 hab/ha

The Planning & Design Approach



- **Planear con anticipación del crecimiento urbano** → horizonte mínimo de 30 a 50 años
- **Planear a la escala del crecimiento y expansión** → aproximación a nivel de la ciudad como un todo con proyecciones realistas de las necesidades y opciones
- **Planear dentro de áreas claramente limitadas y definidas** → para regular, consolidar, preparar.
- **Planear en áreas estratégicamente localizadas** → vis a vis los obstáculos de medio ambiente y fuerzas económicas y infraestructura existente y transporte



Planned vs Unplanned

Planear la Expansion Urbana

1. La oferta de una red de calles de calidad y conectividad
2. Espacio publico suficiente
3. Lotes urbanizados (para construccion)



Elegir el modelo correcto para su ciudad

- 1) Mejorar el espacio publico
- 2) Reducir la necesidad de viajes – commuting por proximidad
- 3) Promover la urbanizacion a traves de la infraestructura y gestion de la agua
- 4) Promover la urbanizacion por via de la energia y gestion de residuos solidos

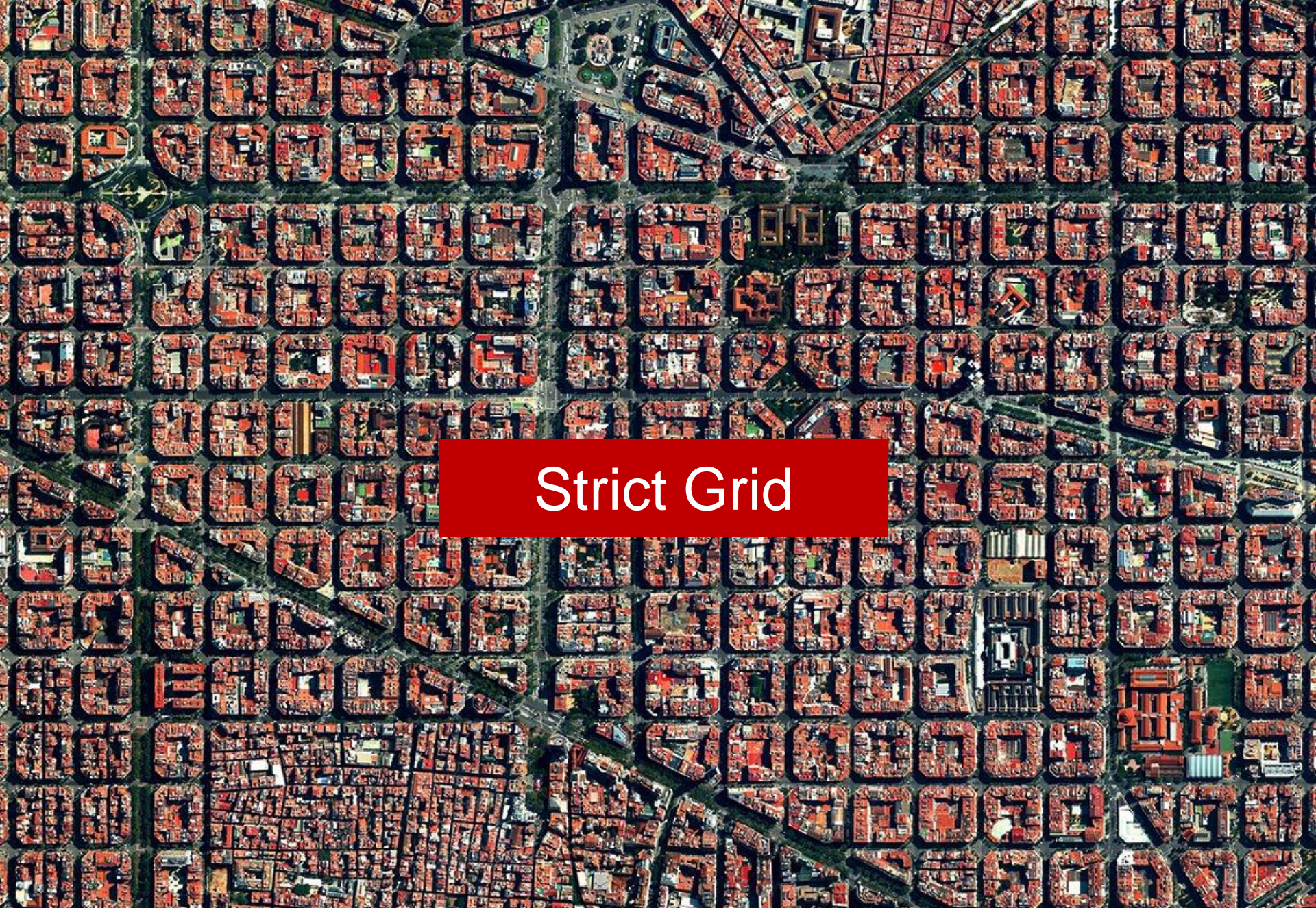




Street Pattern

An aerial, black and white photograph of a densely packed industrial city. The image shows a complex network of buildings, including large factory complexes with multiple gabled roofs and several tall, dark smokestacks. The buildings are closely situated, with narrow streets and alleys visible between them. A prominent red rectangular box is overlaid in the center of the image, containing the text "Many Functions" in white. The overall scene depicts a highly functional and integrated urban environment.

Many Functions



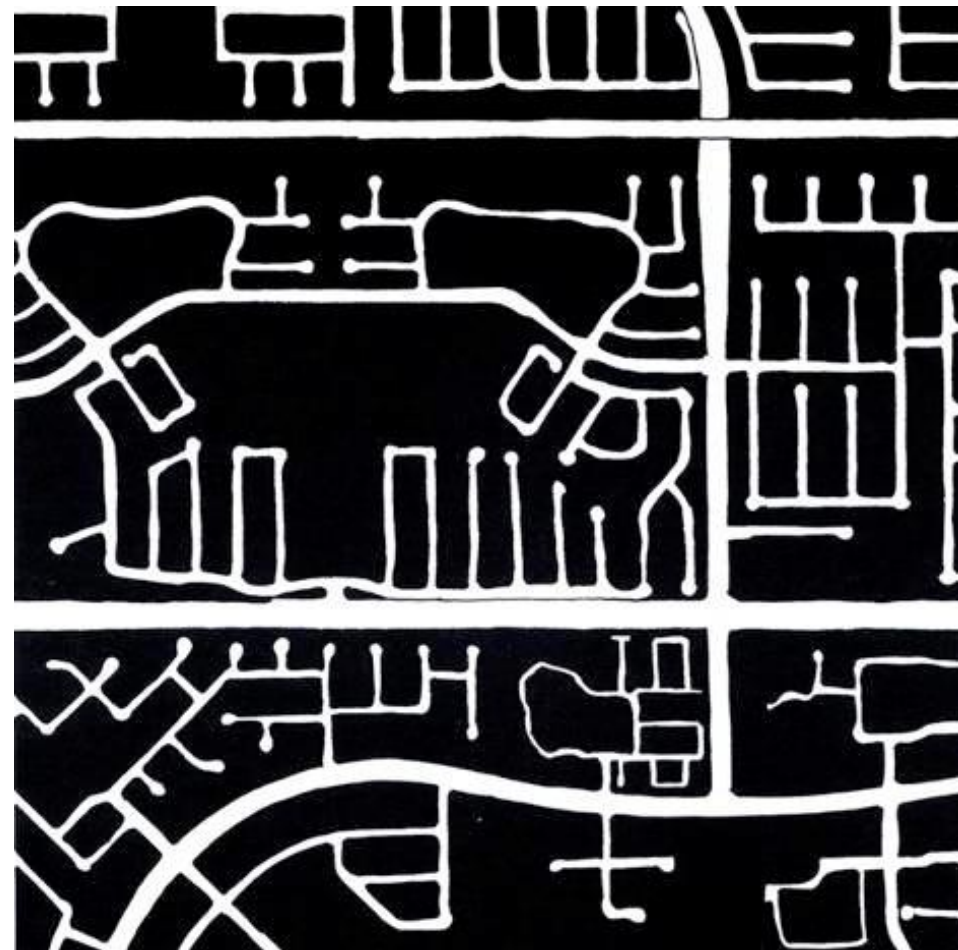
Strict Grid



Structure of neighbourhoods



Savannah, USA
Planned in 1733



Irvine, USA
Planned in 1950

Structure of neighbourhoods



Savannah, USA
Planned in 1733



Irvine, USA
Planned in 1950

An aerial photograph of a suburban residential area, showing rows of houses, green lawns, and some open fields. A large, white, semi-transparent number '4' is overlaid on the left side of the image.

4

Examinando las aproximaciones para la gestion de la Expansion Urbana

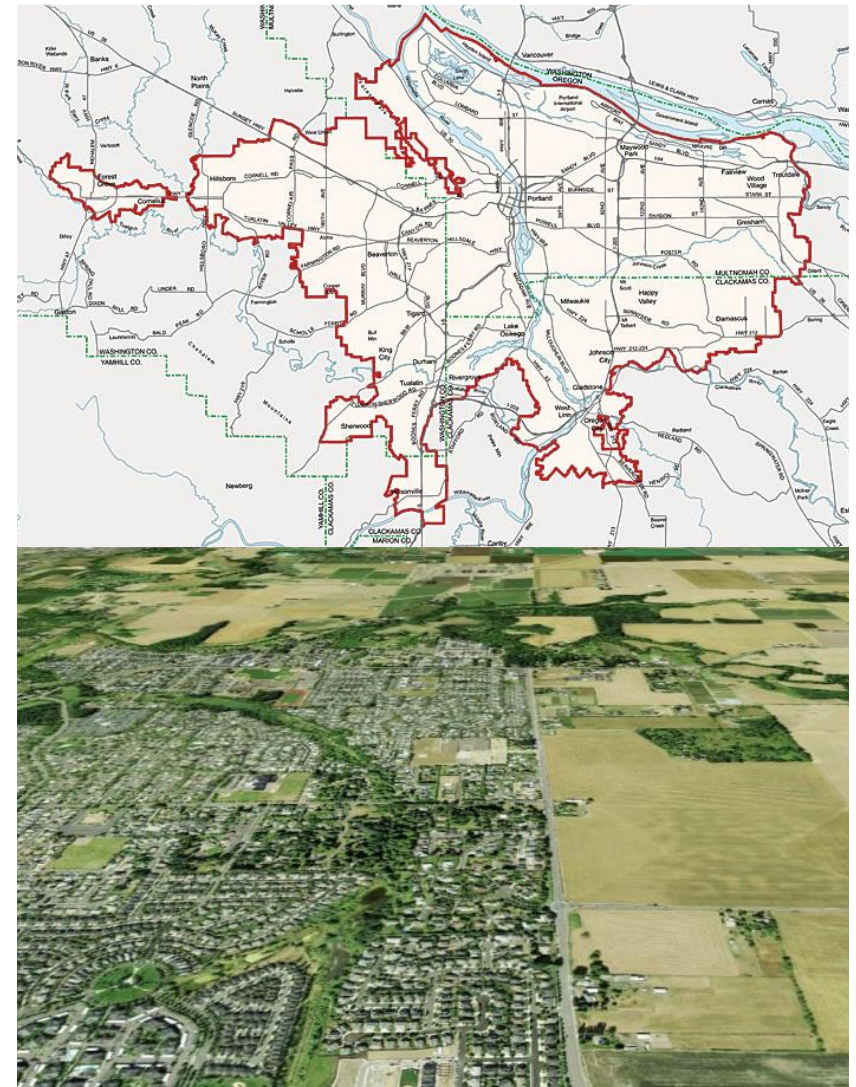
Las Aproximaciones para la Expansión Urbana

1. Transformación, revitalización y consolidación intra-urbana
2. Ciudades Satelites: multiples centralidades
3. Expansión y Ampliación Planeada

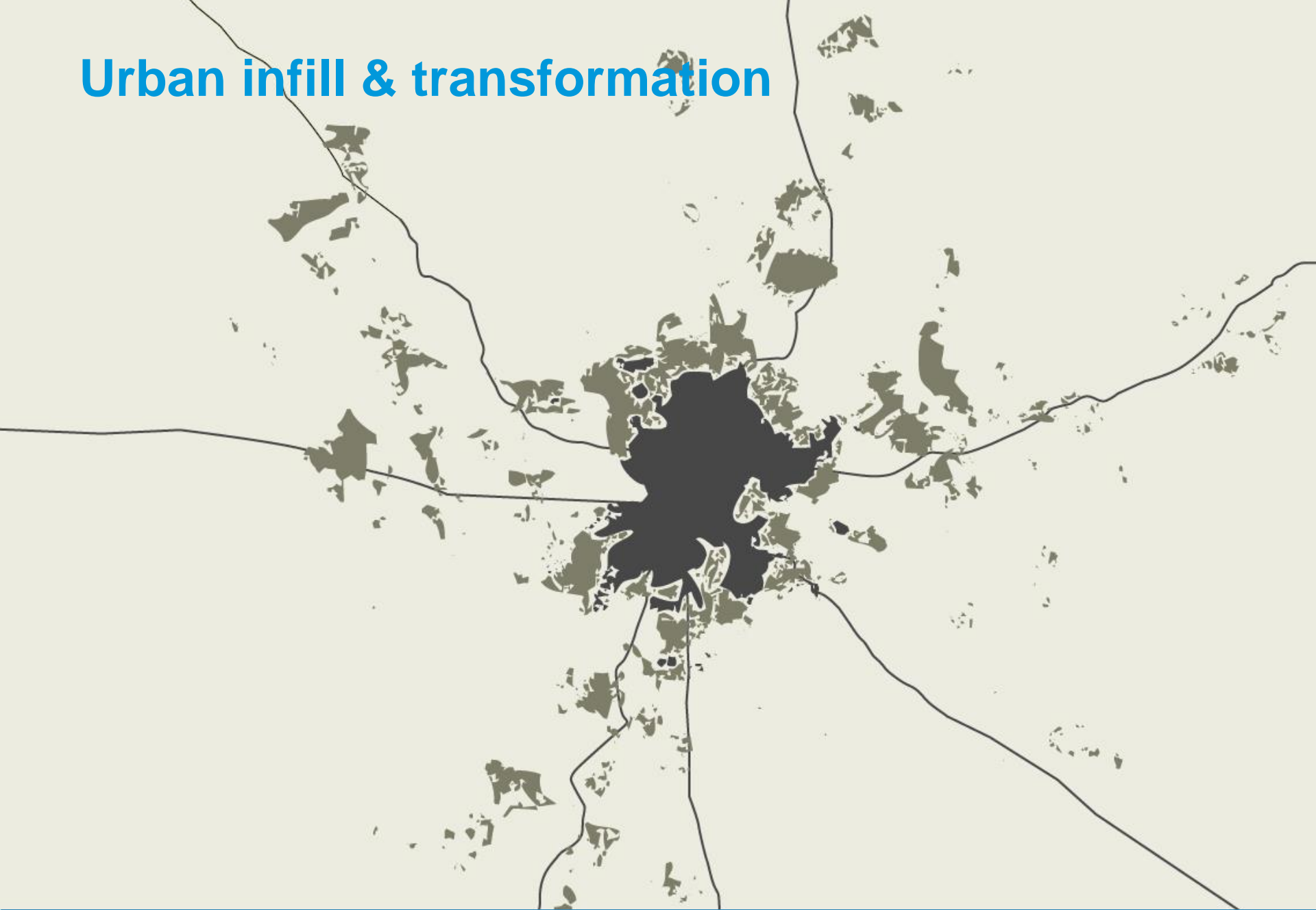


Growth option 1: Urban infill & transformation

1. Suitable for slow population growth
2. Requires strong planning and enforcement capacity to limit growth within boundary
3. Maximizes investment in infrastructure
4. Land value increases due to limited supply which needs sophisticated credit system
5. Example: Portland, USA

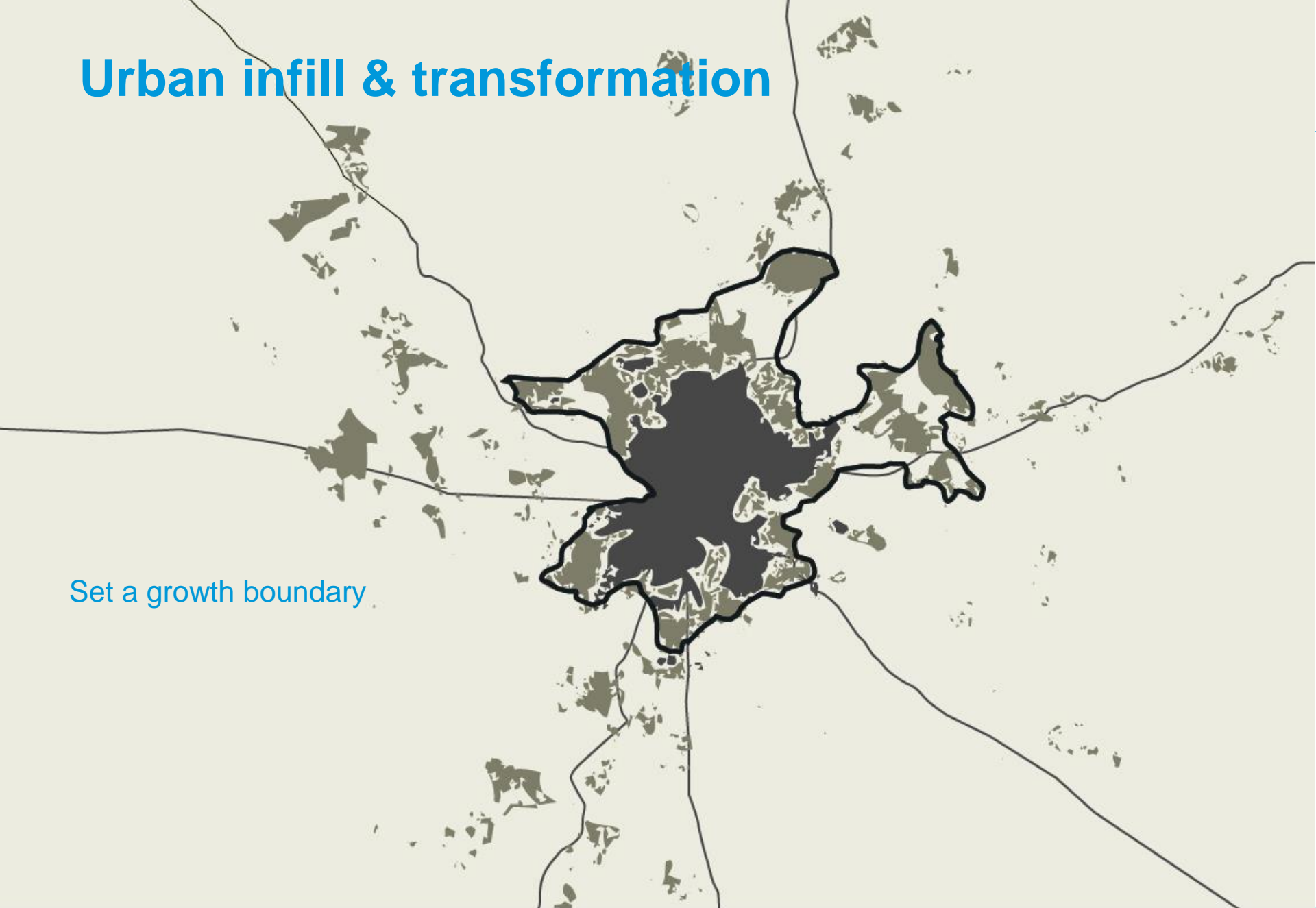


Urban infill & transformation



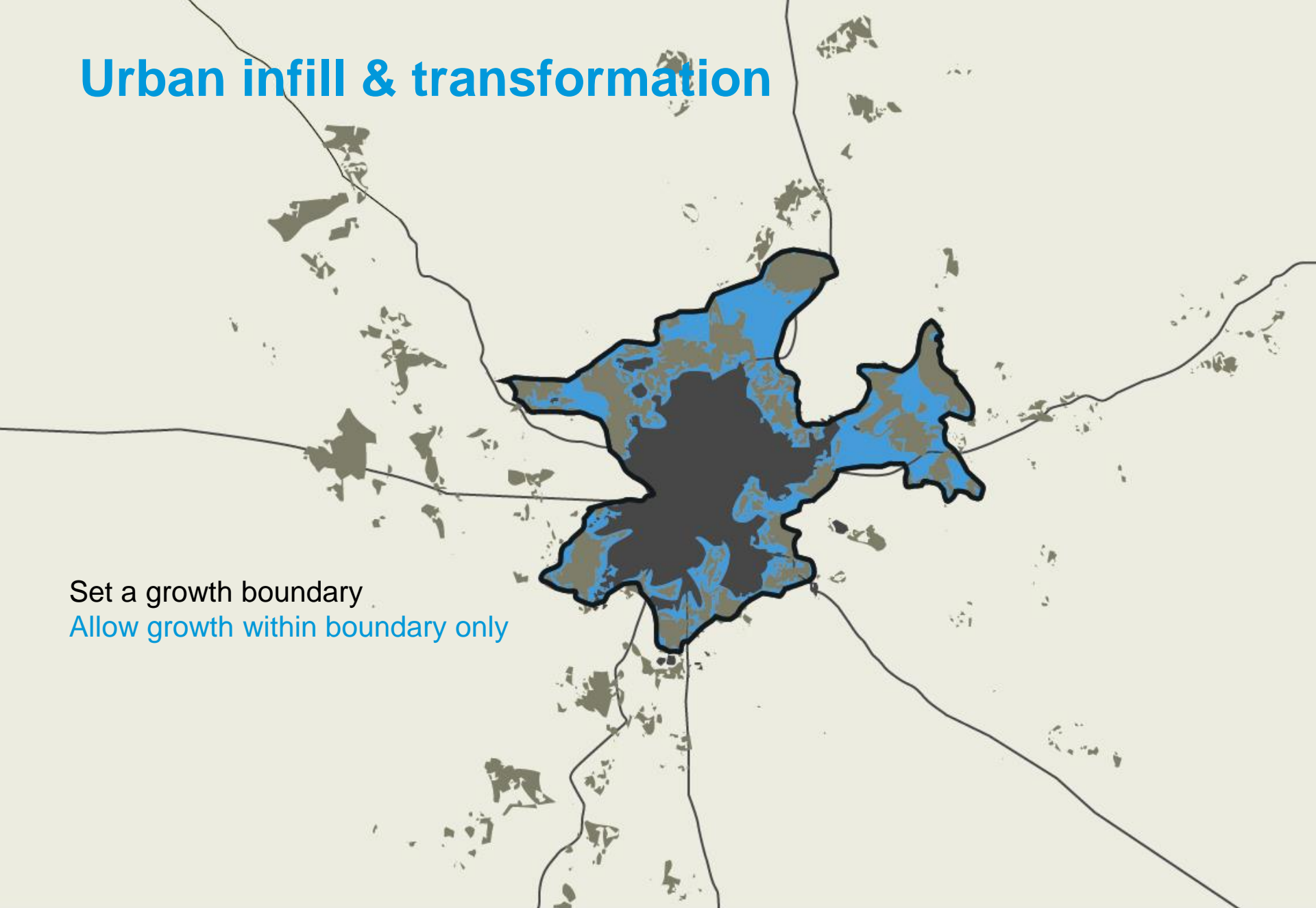
Urban infill & transformation

Set a growth boundary



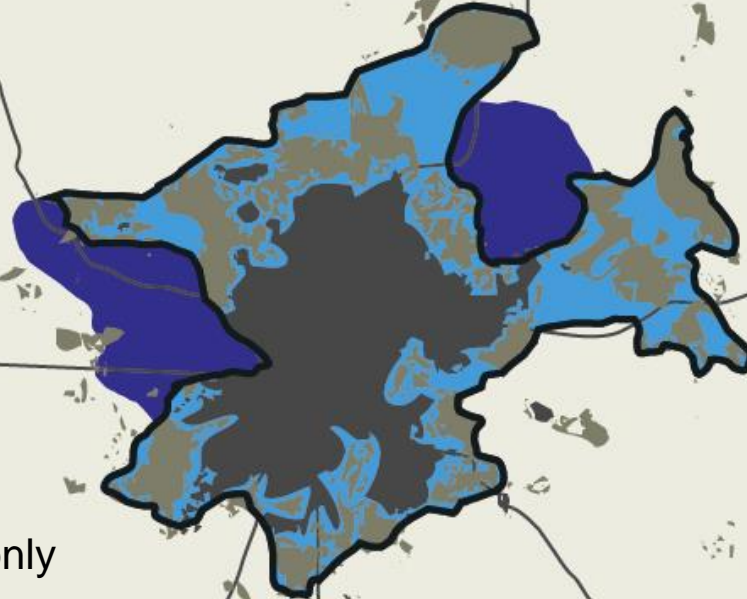
Urban infill & transformation

Set a growth boundary
Allow growth within boundary only



Urban infill & transformation

Set a growth boundary
Allow growth within boundary only
Designate reserve areas



Growth option 2: Satellite towns - Multiple centralities

Indicated for rapid growth (2%+) for large sized cities

Needs coordination between districts or municipalities

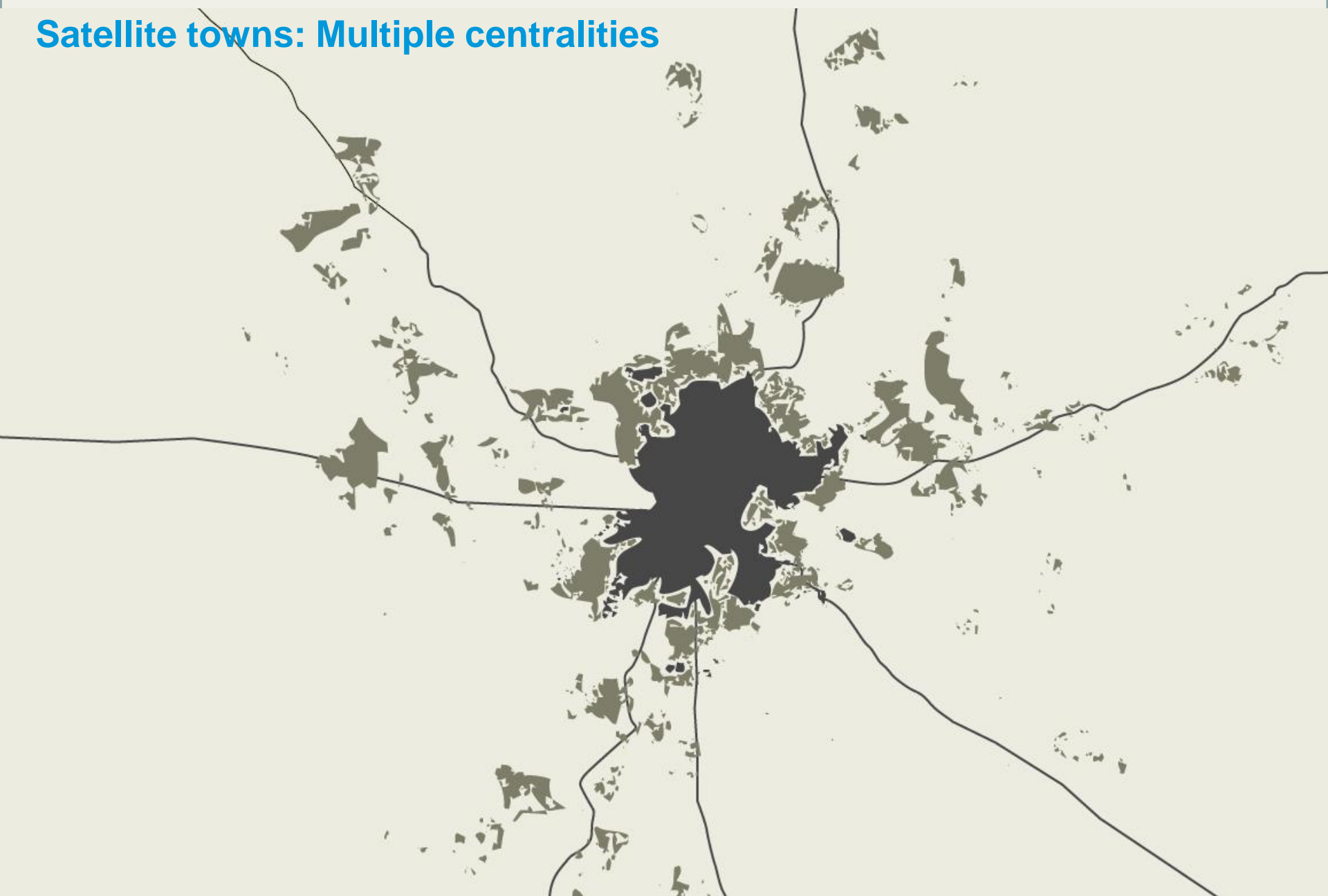
Needs public transport to link with core

Needs jobs and services in satellites

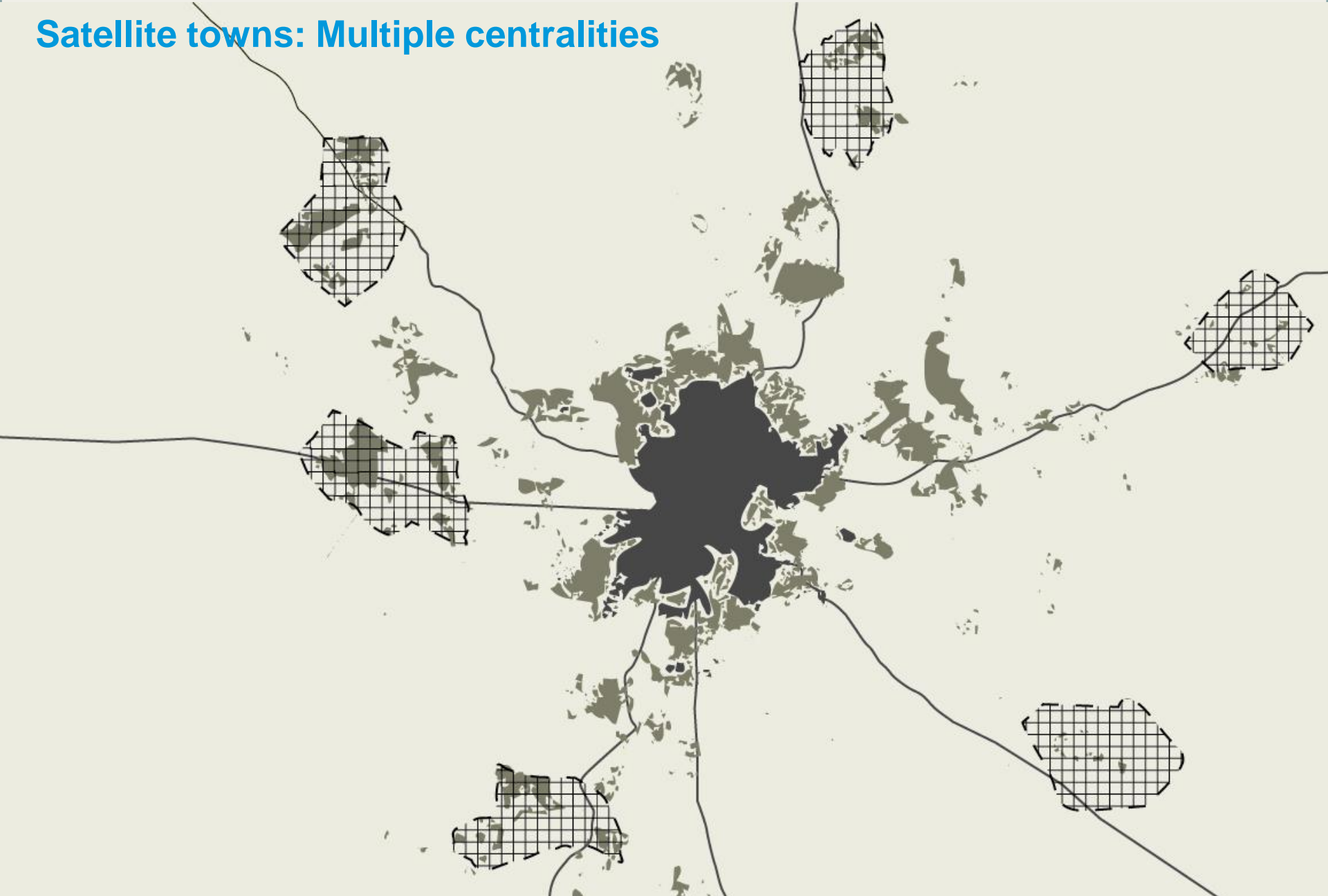
Example: Shanghai, China 1999-2020



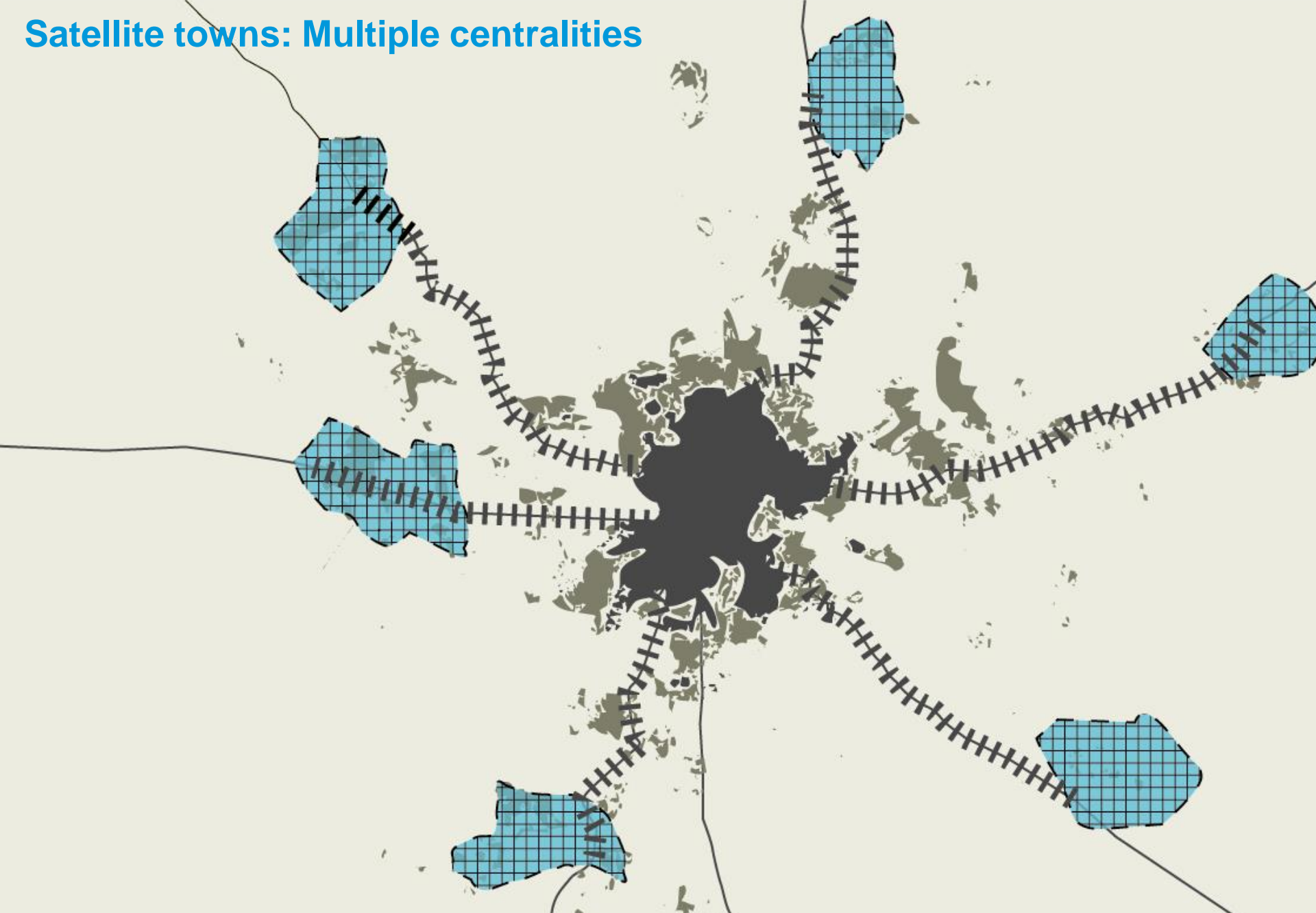
Satellite towns: Multiple centralities



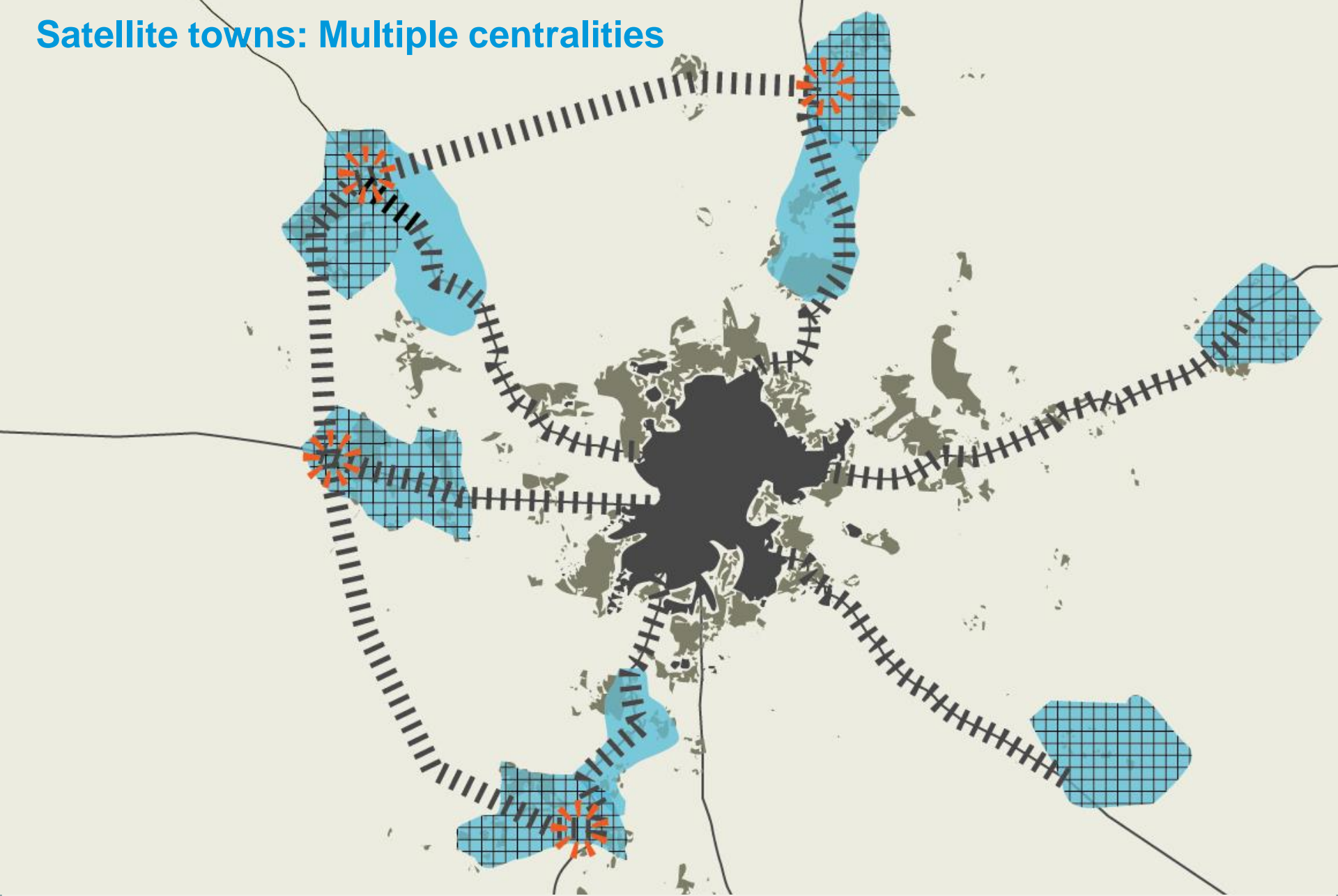
Satellite towns: Multiple centralities



Satellite towns: Multiple centralities

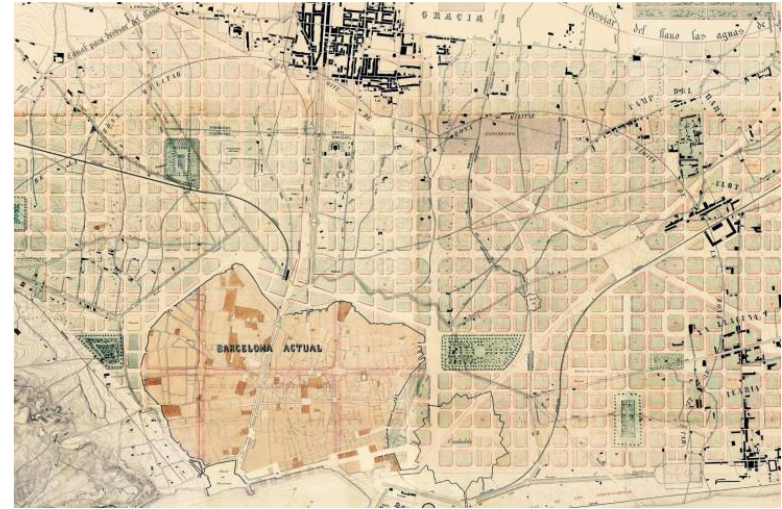


Satellite towns: Multiple centralities



Growth option 3: Planned city extension

- Indicated for rapid growth (2%+) for medium sized cities
- Needs political continuity to implement a long term plan
- Needs understanding of market to identify development stages
- Link with existing infrastructure
- Example: Barcelona, Spain - Plan of 1859

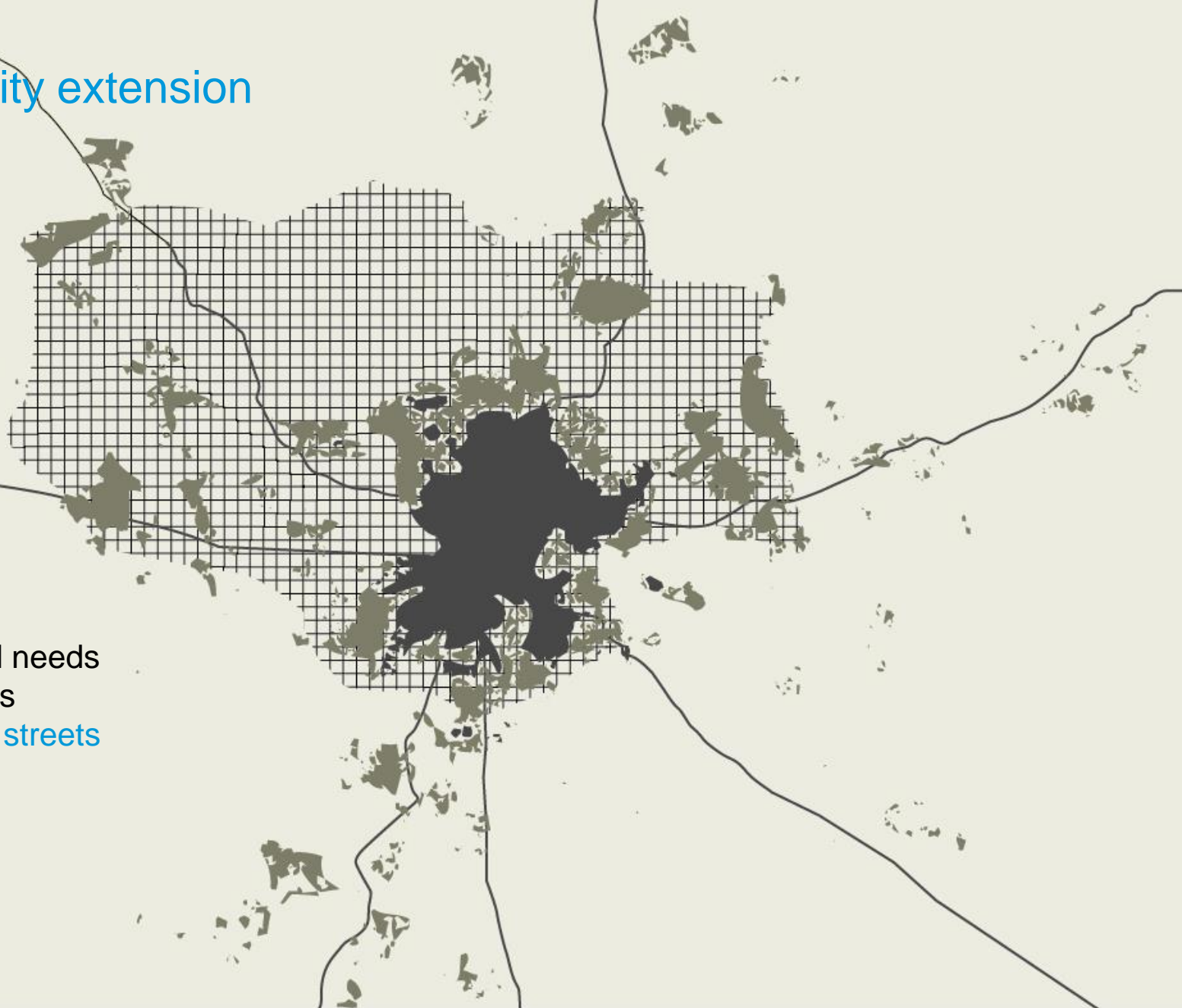


Planned city extension

Calculate land needs
for 20-30 years

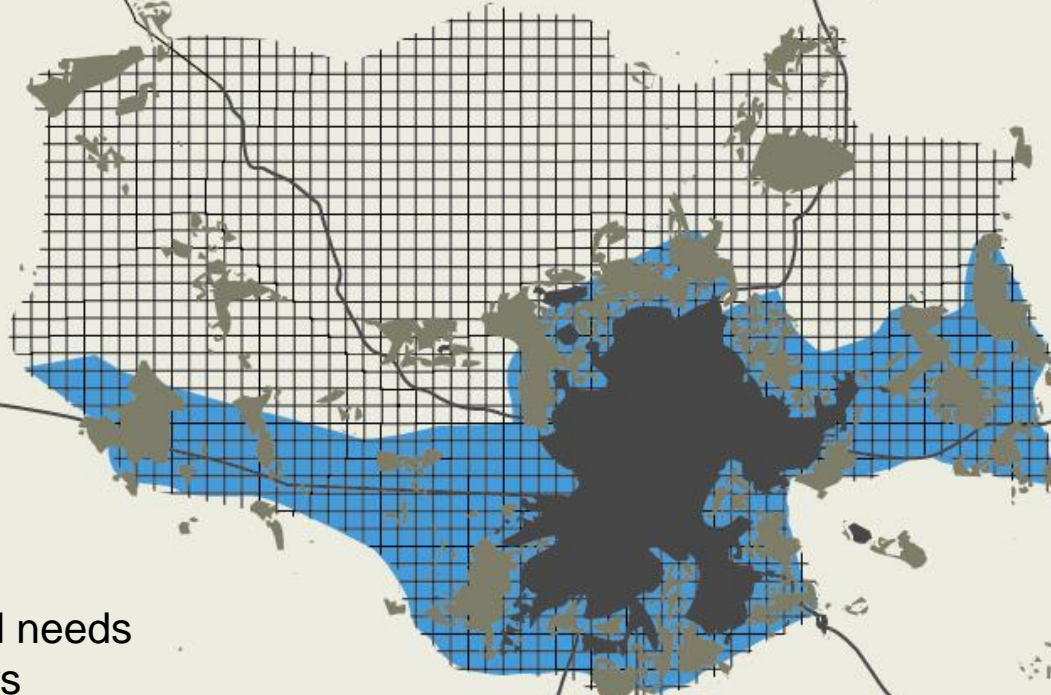


Planned city extension



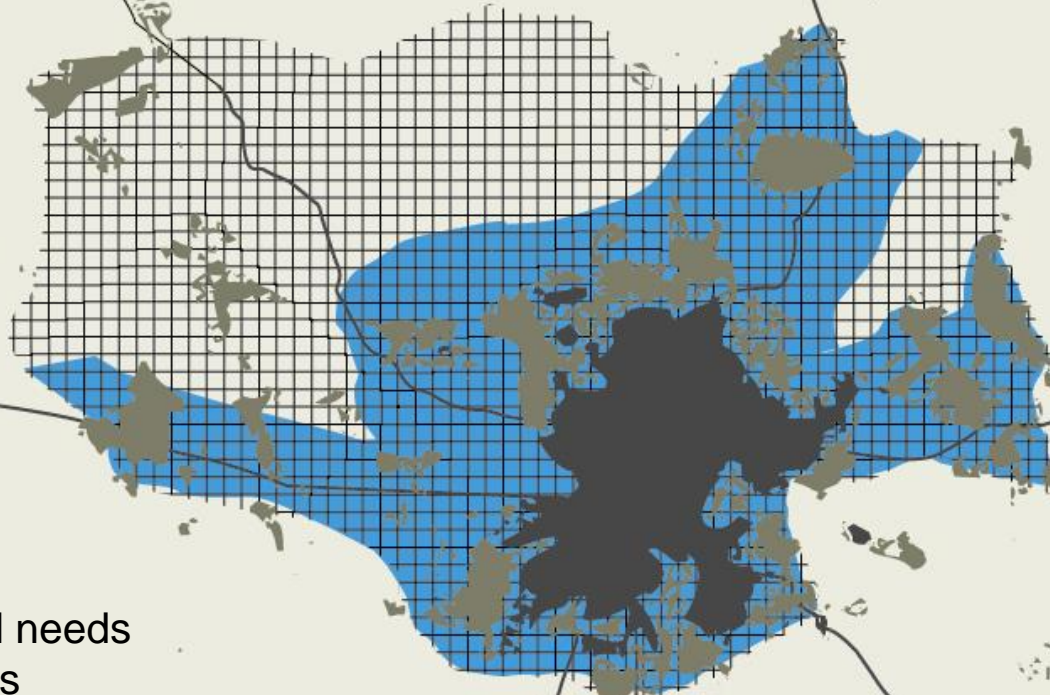
Calculate land needs
for 20-30 years
Layout grid of streets

Planned city extension



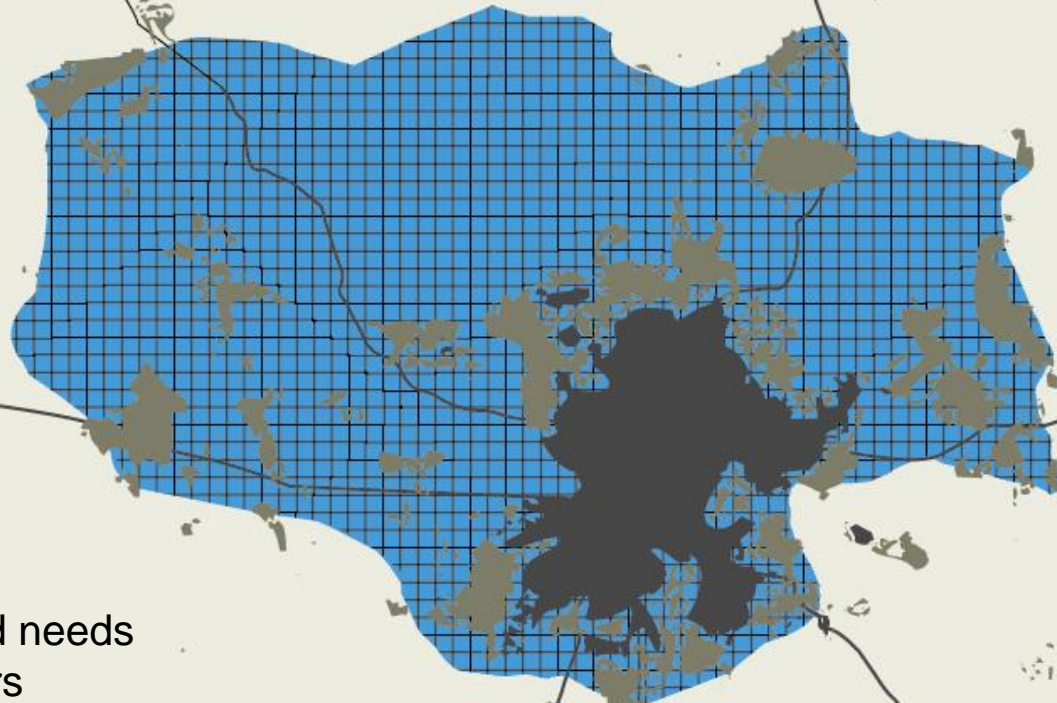
Calculate land needs
for 20-30 years
Layout grid of streets
Develop according to
demand

Planned city extension



Calculate land needs
for 20-30 years
Layout grid of streets
Develop according to
demand

Planned city extension



Calculate land needs
for 20-30 years
Layout grid of streets
Develop according to
demand

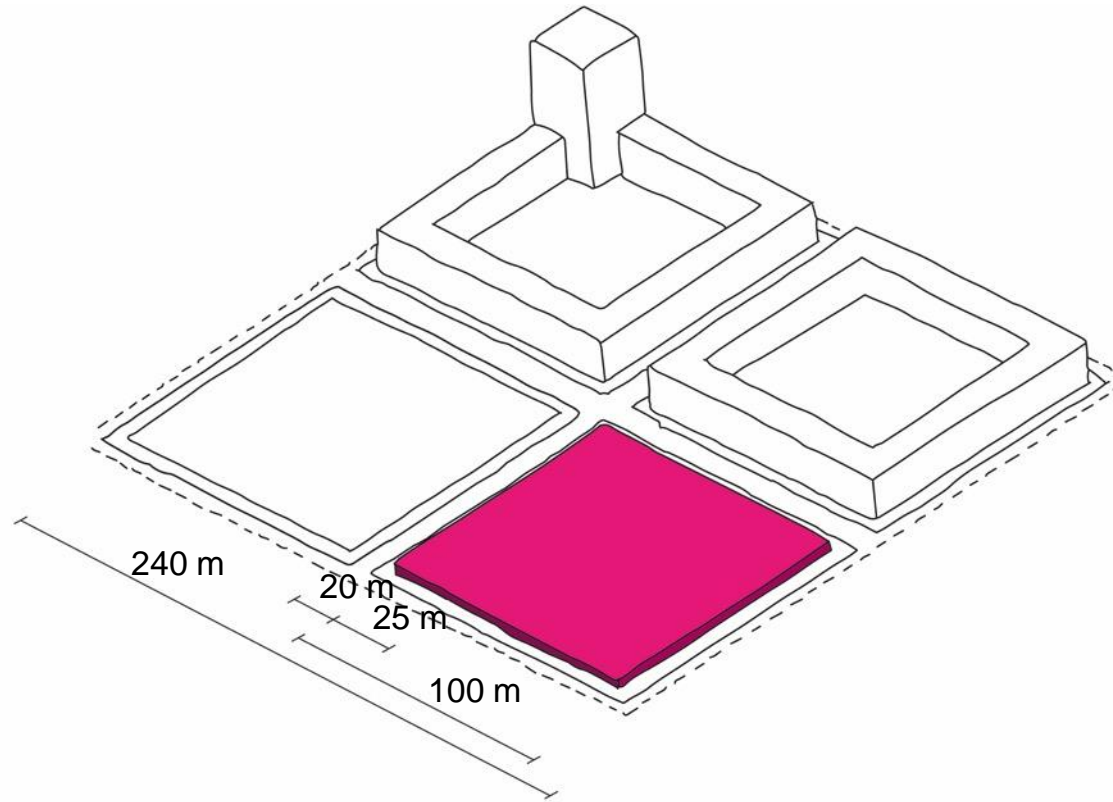



5


Part five

Examining Density

Floor area ratio (FAR)

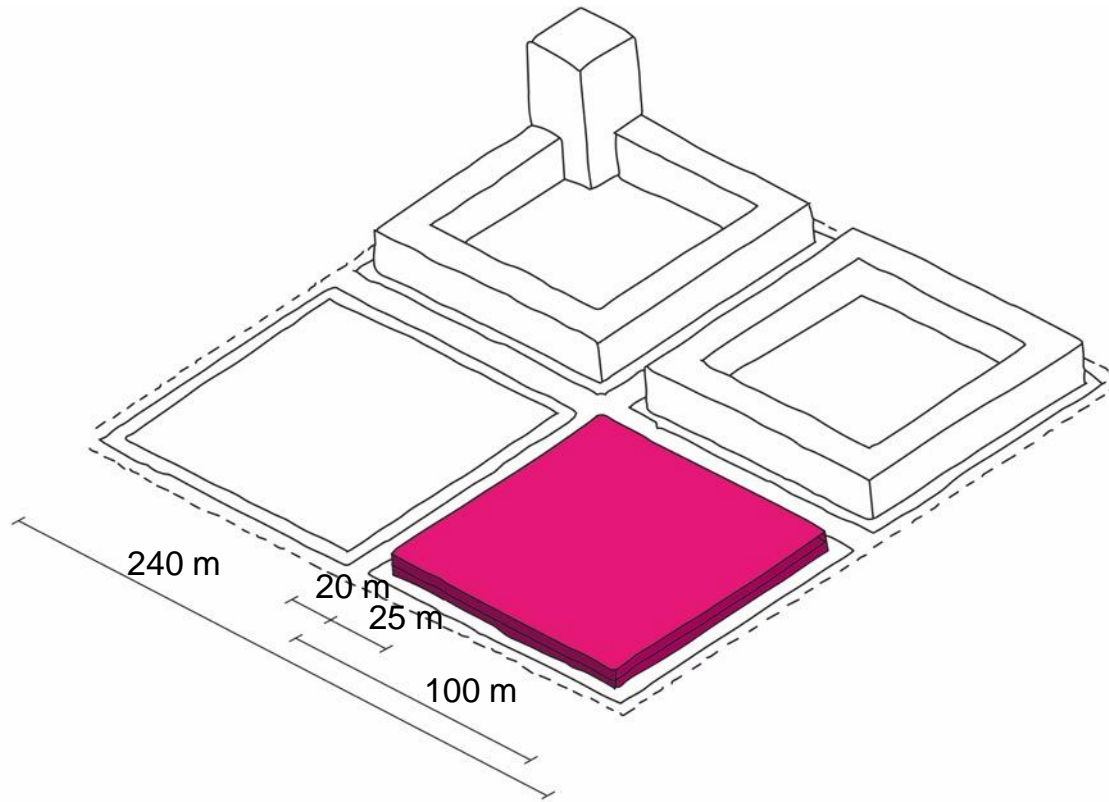



 Floor Area = $1 \times (100 \times 100) = 10.000 \text{ m}^2$


 Plot Area = $100 \times 100 = 10.000 \text{ m}^2$

FAR = Floor Area/Plot Area = 1

Floor area ratio (FAR)

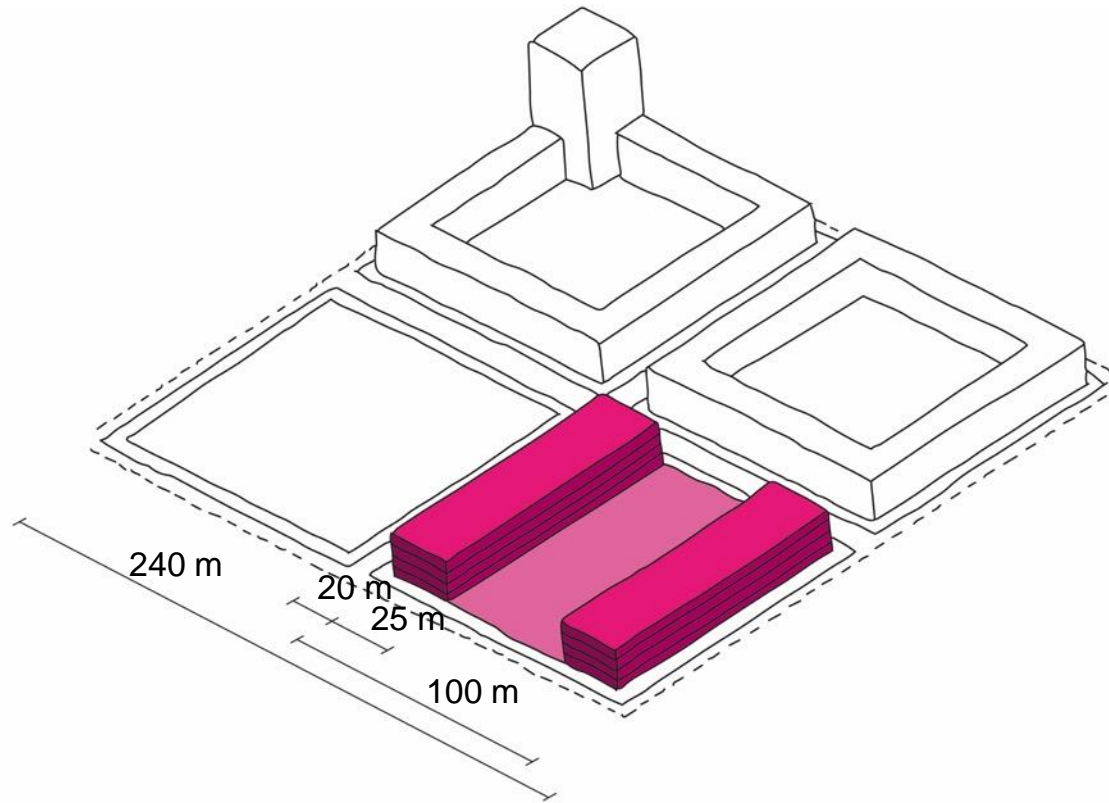



 Floor Area = $2 \times (100 \times 100) = 20.000 \text{ m}^2$

 Plot Area = $100 \times 100 = 10.000 \text{ m}^2$


FAR = Floor Area/Plot Area = 2

Floor area ratio (FAR)

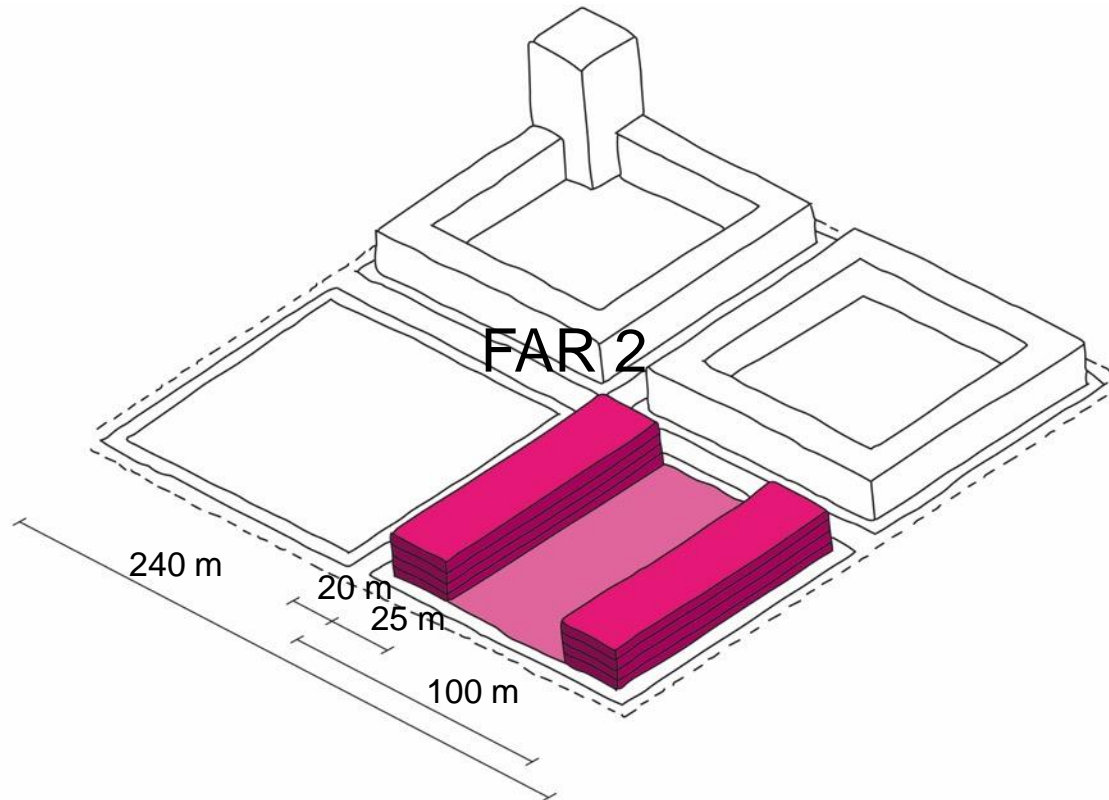



 Floor Area = $2 \times [4 \times (100 \times 25)] = 20.000 \text{ m}^2$

FAR = Floor Area/Plot Area = 2


 Plot Area = $100 \times 100 = 10.000 \text{ m}^2$

Floor area ratio (FAR)

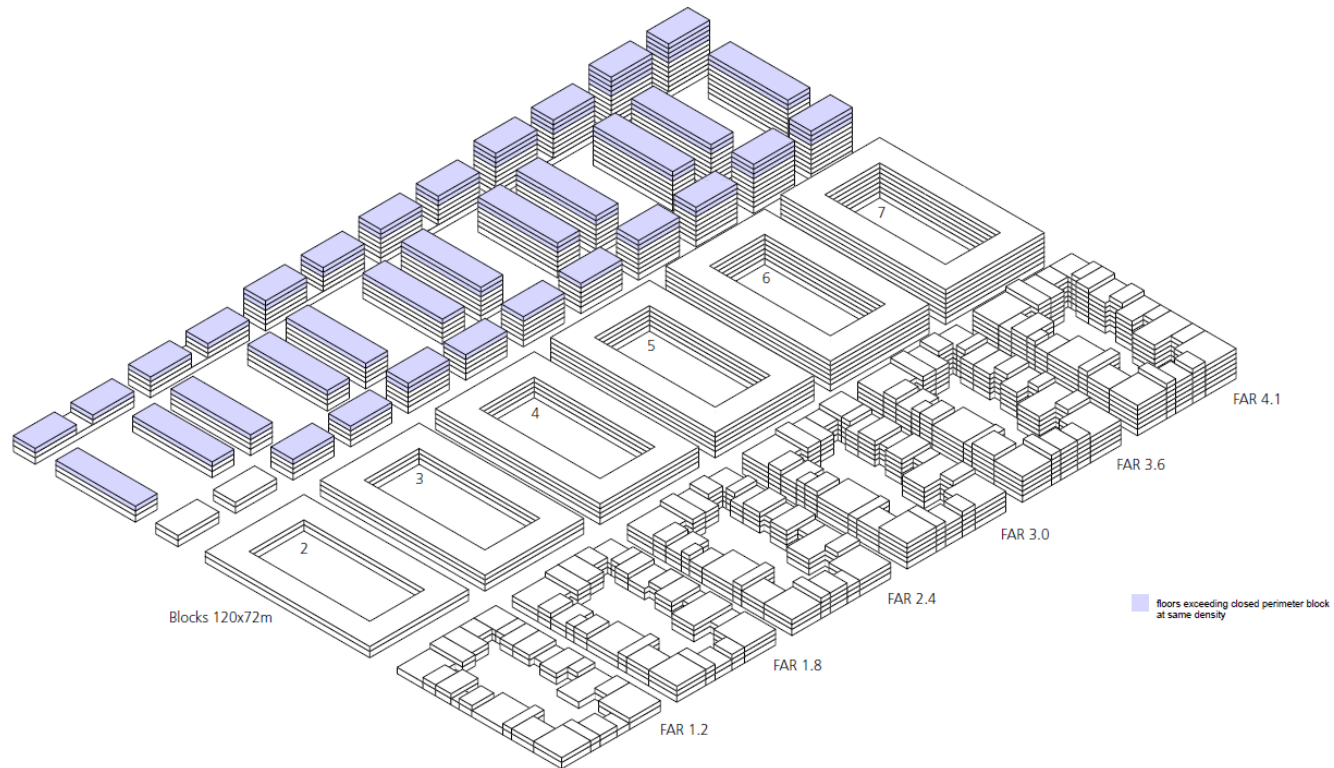


 Floor Area = $2 \times [4 \times (100 \times 25)] = 20.000 \text{ m}^2$

FAR = Floor Area/Plot Area = 2

 Plot Area = $100 \times 100 = 10.000 \text{ m}^2$

Example: Floor area ratio (FAR)

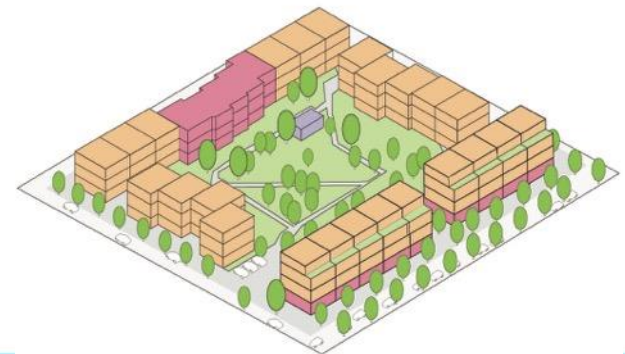
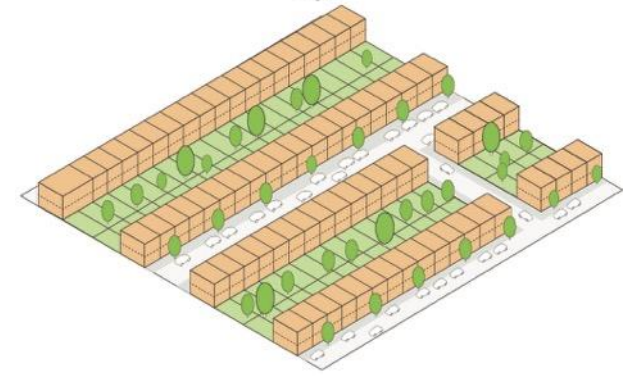
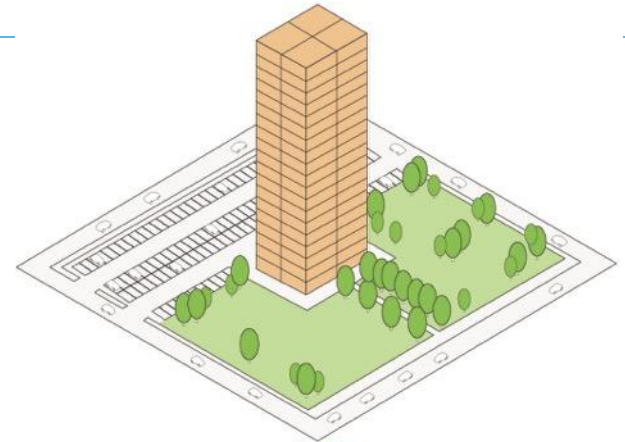


Floors	sq m2/floor	Total sq m2	Floor Area Ratio	25% residential units	75% other m2	50% residential units	50% other m2	75% residential units	25% other m2
2	5.120	10.240	1,2	26	7.680	51	5.120	77	2.560
3	5.120	15.360	1,8	38	11.520	77	7.680	115	3.840
4	5.120	20.480	2,4	51	15.360	102	10.240	154	5.120
5	5.120	25.600	3,0	64	19.200	128	12.800	192	6.400
6	5.120	30.720	3,6	77	23.040	154	15.360	230	7.680
7	5.120	35.840	4,1	90	26.880	179	17.920	269	8.960

- housing units min./max.
- offices/commerce/hotels min./max.
- Average mix

Same FAR, different quality

- High building height, low plot coverage
- Low building height, high plot coverage
- Medium building height, medium plot coverage



An aerial photograph of a city, showing a dense urban area with a grid-like street pattern and some green spaces. A dark horizontal band is overlaid across the middle of the image, containing the word 'Conclusion' in white text.

Conclusion

Lessons learned

1. Land supply at scale and orderly patterns of expansion will generate planned urban expansion for sustainable urban development
2. PCE is key for cities to be able to establish a solid basis for future economic & social growth.
3. PCE is an urban planning approach that can offer sufficient, affordable and serviced land (urban plots) at scale and in a timely fashion
4. Successful PCE's have a clear financial plan, an enabling regulatory framework, and urban design that incorporates compact and mixed-use development, and ample public space and density



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