

Soft densification strategies for Czech republic suburbs

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01 Introduction (what is the problem)

Growth of czech suburbs after 1990 can be described as a massive, unregulated and chaotic development of extensive and amorpheous settlements of individual family houses, characterised by low efficiency.

The fundamental problems of this type of development are:

- low or non-existent civic infrastructure,
- poor quality public spaces and the absence of public life (isolation of residents),
- dependance on individual car traffic - traffic jams and parking issues in the inner city,
- excessive financial burden on municipalities and,
- above all, **the irreversible devastation of the landscape**

"suburbanisation as a land-consuming phenomenon creating a socially, ecologically and economically imbalanced environment" (Geneva UN Charter on Sustainable Housing, 2015)

Sustainability?

253m², Price: 24 mil CZK



Source: Grandys Reality

Public space?



Source: googlemaps.com

Traffic load

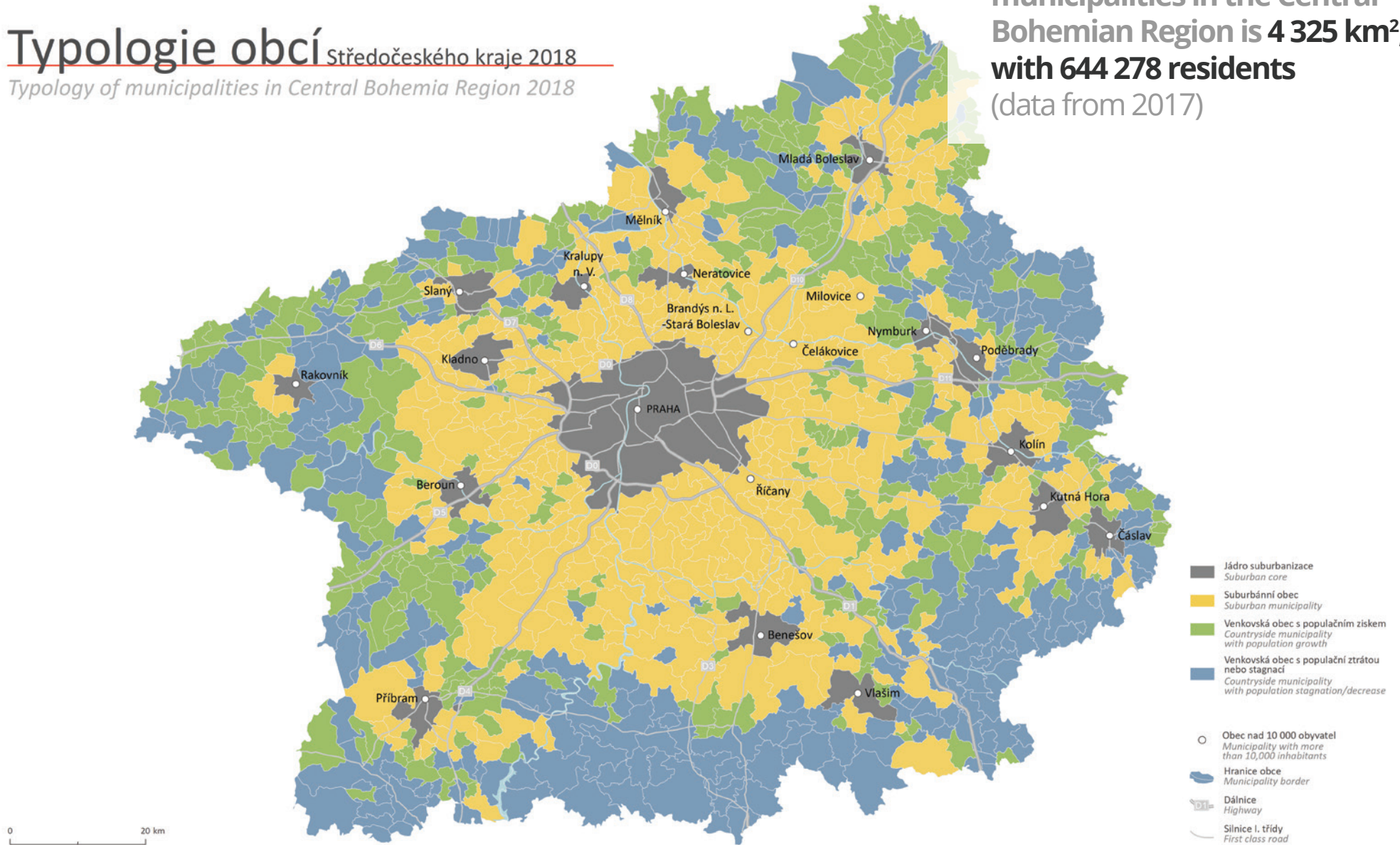


Source: lidovsky.cz

01 Extent of the problem

Typologie obcí středočeského kraje 2018
Typology of municipalities in Central Bohemia Region 2018

The total area of suburban municipalities in the Central Bohemian Region is **4 325 km²**, with **644 278 residents** (data from 2017)



01 Framework

Demand for suburban living is still ongoing!

The population forecast for the Prague suburban zone between 2022 and 2030 is 17,000 new inhabitants (*Burcin 2013*),

with an average household size of 2.15 persons, this requires 7,906 new dwellings.

Is it possible to fit some of these dwellings into existing built environment?

Suburban population is ageing

In terms of the projected age composition of the population, by 2030 there will be almost 150,000 people of post-working age in the Prague suburban zone. (*Burcin 2013*)

There is not enough money

Municipal budgets are tight due to large infrastructure costs, so there is no money for big top-down developments. (*Hudeček 2018*)

Private plots

The land is divided into private plots, so no development is possible without the involvement of local residents.

Main theme of this dissertation is to show that existing suburbs are not the final state of their development and to research suitable possibilities of their further development - renewal.

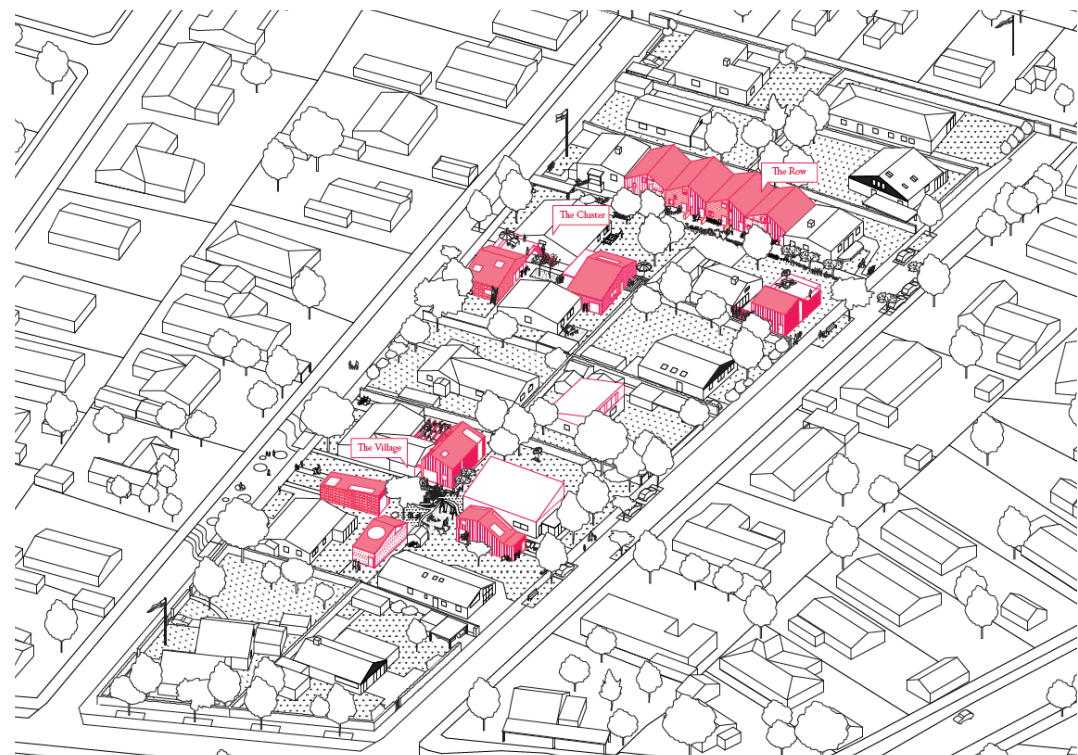
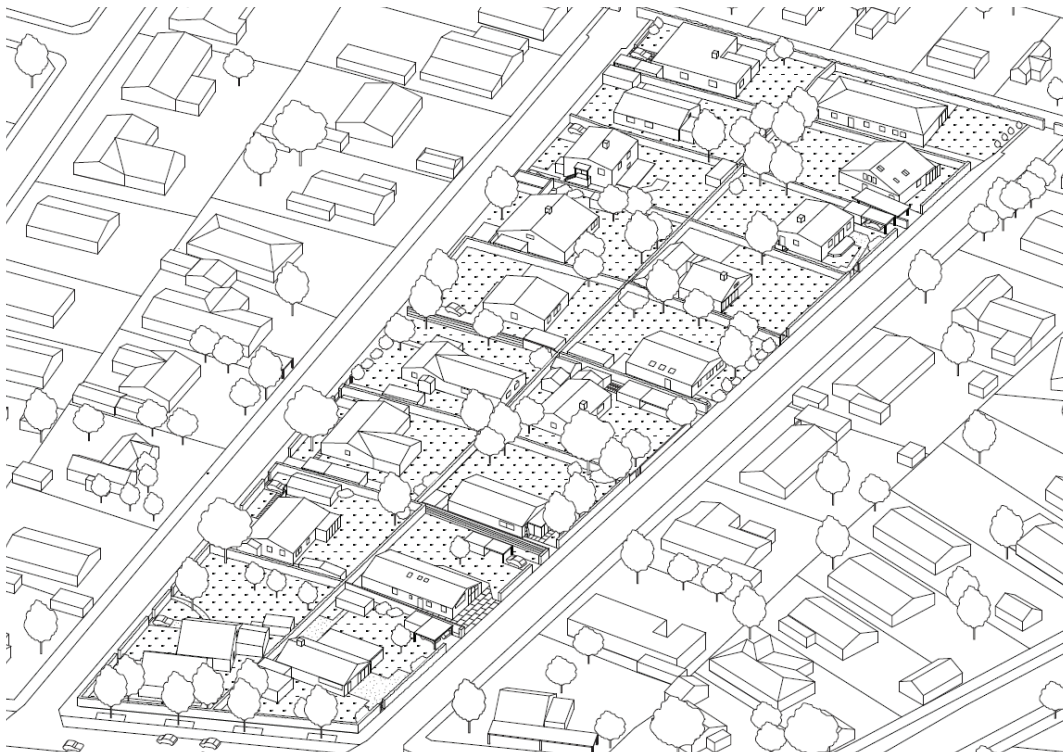
02 Suburban development approaches

	PUBLIC PROPERTY (OR DEVELOPER BUYOUT MULTIPLE PLOTS)	PRIVATE PROPERTY	INITIATED BY PUBLIC ACTORS (DEVELOPERS MUNICIPALITIES)	INITIATED BY PRIVATE ACTORS (DWELLERS, CIVIC ASSOCIATION)
Retrofitting Suburbia	●		●	
20-minute Suburbs	●	●	●	
Tactical Urbanism	●			●
Urban Acupuncture	●	●		●
Hard Densification	●	●	●	
Soft Densification		●		●

The soft densification method corresponds to the described framework.

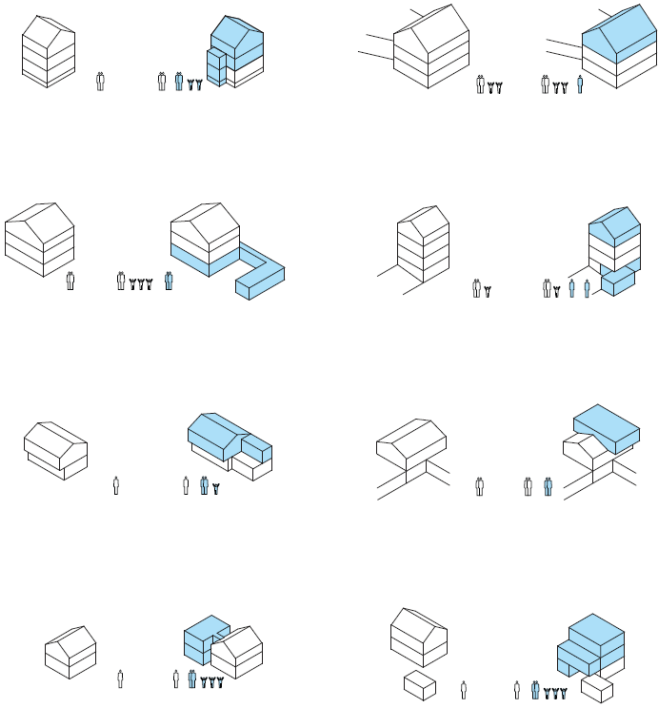
02 Soft densification

The term "soft densification" has become established in European countries to describe the incremental increase in density that occurs on private plots and is mostly initiated by the dwellers themselves.



Source: Elin Ingrid Hirsch - RE-housing Danish Suburbia

02 Soft densification - review



MétamorpHouse Concept Scheme - Mariette Beyeler, Switzerland



Zecc Architecten - garage infill conversion, Utrecht



Hasenboehler house, subdivision with extension, MétamorpHouse, Villars-sur-Glane



The gouse - Marta Nowicka - garage conversion, London



BIMBY - infill development sketch, France

ADU - Additional Dwelling Unit

Subdivision - plot or house

Extension - vertical or horizontal

Excavation - underground level

Conversion - mix-use, garage

Infill - separate or connected

03 Research question

How can specific characteristics of soft densification scenarios influence the local residents evaluation of soft densification?

How does the residents evaluation of soft densification scenarios varies by age of respondents?

Main Objectives

- to find a way to manage soft densification of czech suburbs by improving built environment and maximizing the benefits it might offer
- to identify motives of suburban residents towards soft densification
 - opportunities, benefits, risks

03 Method



Key elements of successful strategies? (Incentive, collective, regulatory)

1. Socio-demographic data

2. Residents evaluation of current housing situation

- importance of attributes
- evaluation of attributes (privacy level, housing costs, accessibility of amenities, public transport)

3. Questions about their attitudes towards soft densification scenarios (behavioral analysis)

- combination of soft densification spatial options x neighborhood attributes
- comparison and indication of preferred variable

Risk: Opposing on principle?

Hier sehen Sie verschiedene Wohnsituationen. Bitte geben Sie bei jeder Wohnsituation an, ob diese für Sie denkbar wäre oder nicht in Frage käme.

Am besten lesen Sie jede Spalte für sich durch und entscheiden spontan. Um die Erklärungen nochmals zu sehen, bewegen Sie den Mauszeiger über die jeweilige Eigenschaft.

1. von 7 Seiten

<p>7 choice tasks</p> <p>Neighborhood densification attribute including illustration</p> <p>4-6 additional attributes</p> <p>Choice task</p>	<p>Dichte: Höher als heute</p> <p>Verkehrs- und Nachbarschaftslärm: Gleich wie heute</p> <p>Angebot Kultur, Essen, Vergnügen: Gleich wie heute</p> <p>Anbindung öffentlicher Verkehr: Schlechter als heute</p> <p>Parkmöglichkeiten: Schlechter als heute</p> <p>Wohnkosten: 20% mehr als heute</p> <p><input type="radio"/> Wäre für mich denkbar</p> <p><input type="radio"/> Käme nicht in Frage</p>	<p>Dichte: Wie heute</p> <p>Verkehrs- und Nachbarschaftslärm: Lärmer als heute</p> <p>Angebot Kultur, Essen, Vergnügen: Mehr als heute</p> <p>Anbindung öffentlicher Verkehr: Gleich wie heute</p> <p>Parkmöglichkeiten: Gleich wie heute</p> <p>Wohnkosten: Gleich viel wie heute</p> <p><input type="radio"/> Wäre für mich denkbar</p> <p><input type="radio"/> Käme nicht in Frage</p>	<p>Dichte: Höher als heute</p> <p>Verkehrs- und Nachbarschaftslärm: Ruhiger als heute</p> <p>Angebot Kultur, Essen, Vergnügen: Gleich viel wie heute</p> <p>Anbindung öffentlicher Verkehr: Gleich wie heute</p> <p>Parkmöglichkeiten: Besser als heute</p> <p>Wohnkosten: 20% weniger als heute</p> <p><input type="radio"/> Wäre für mich denkbar</p> <p><input type="radio"/> Käme nicht in Frage</p>	<p>3 scenarios</p> <p>Attribute characteristics</p>
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03 Expected findings

The findings should indicate

- **what soft densification scenarios are acceptable to residents**
- **what are the key attributes of acceptable soft densification scenarios**

For example: "Infill development was better perceived if a public space was also created - bench seating."

"Subdivisions were negatively perceived even with preservation of private gardens."

According to the age analysis, the potential for soft densification can be determined

- the hypothesis is that demographically older suburb, will be more open towards soft densification than demographically younger suburb and that municipalities should prepare for this trend and support their residents with education and project support

Both findings can be use as a background for municipal decision-making process.

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