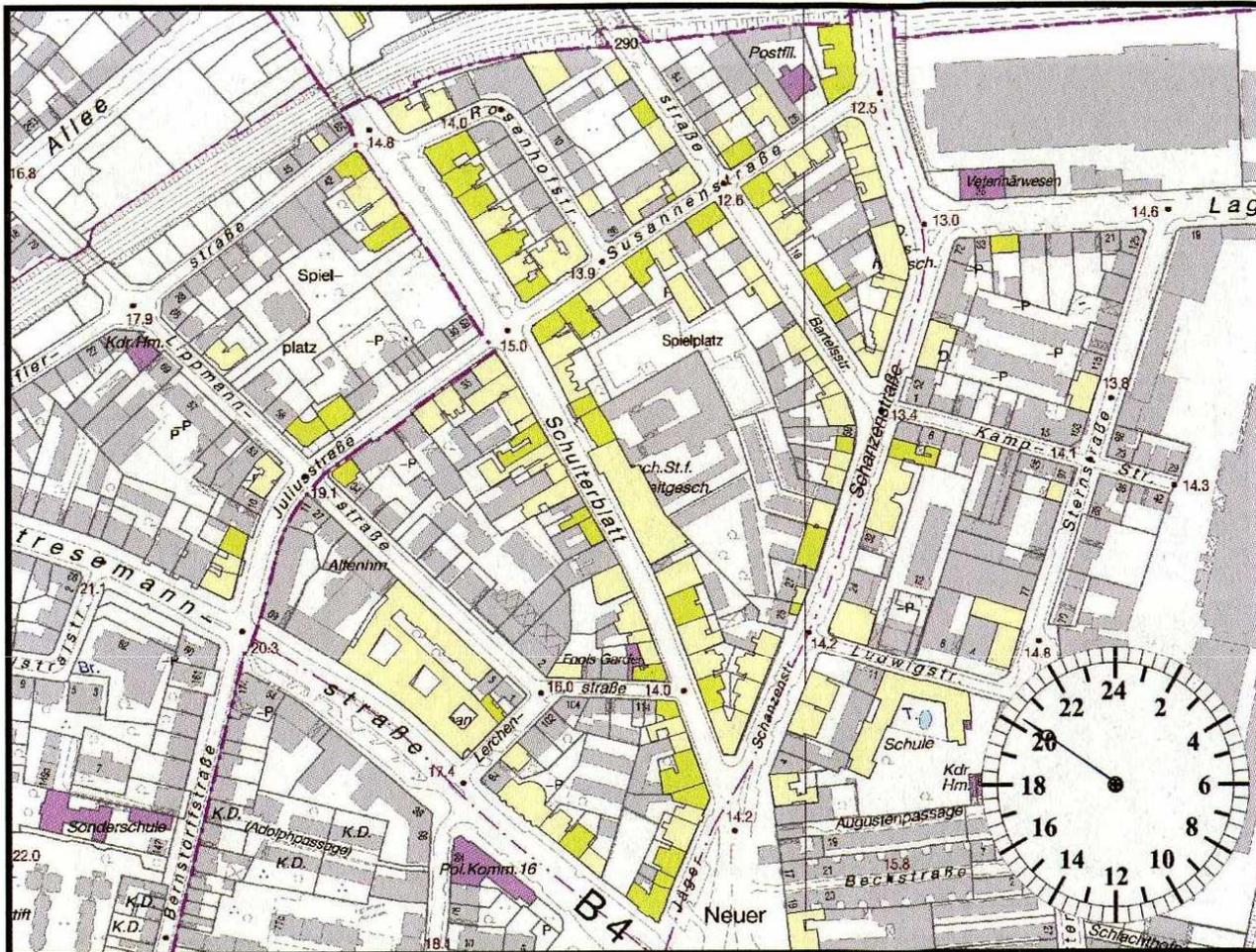


# Urban Time and Energy (UTE)

## Time-space-energy Scenarios in Urban Areas

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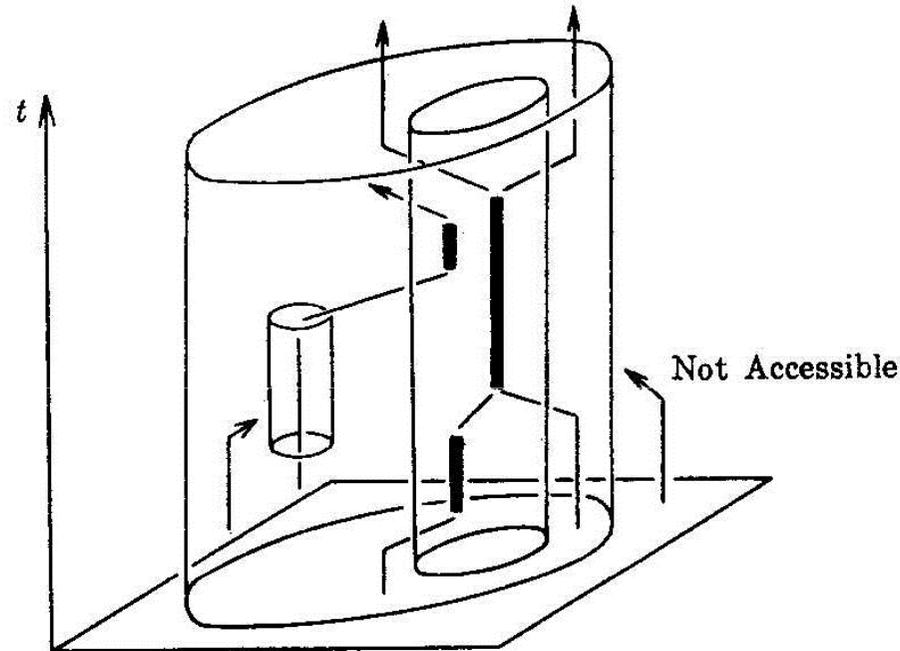


On/Off-Map Hamburg Schanzenviertel, opening hours of infrastructural facilities at a workday, shortly past 8. p.m.

Source: Läßle, D., Mückenberger, U., Oßenbrügge, J., 2010. Zeiten und Räume der Stadt: Theorie und Praxis. Barbara Budrich, Opladen.

Abbildung 21: Screenshot einer On/Off-Map des Hamburger Schanzenviertels – Darstellung der Öffnungszeiten von infrastrukturellen Einrichtungen (Gastronomiebetriebe, Geschäfte, Bildungseinrichtungen). In diesem Standbild ist die Situation an einem Werktag kurz nach 20 Uhr erfasst.

**„... Regional Science is about people and not just about location.“ (Hägerstrand 1970)**



**FIGURE 4. Hierarchy of Domains**

Source: Hägerstrand, T., 1970. What about People in Regional Science? Papers of the Regional Science Association, 24, 7-21.



Città di Bolzano  
Stadt Bozen

**EURAC**  
research

Tempi della città e qualità  
della vita Zeiten der Stadt  
und Lebensqualität Time  
policies and quality of life

**12. | 13. 10. 2007**

Congress "Time policies and quality of life,"  
Bozen, EURAC Convention Center - 12. und 13. Oktober 2007

„Each individual possessing a network of ties in space – ties to different places in the city, but sometimes to other cities or places – business contacts, vacations, visits, and the like.“(Chapin 1974)

**SOCIAL ACTIVITIES**

(Choose as many single hours as you wish)

1. Telephoning or writing letters to FRIENDS

2. Visiting in the neighborhood

(Choose by two-hour strips)

\*3. Socializing in your house or friend's house. (Getting together for coffee, going to a tea, cocktail party, etc.)

(Choose by four-hour strips)

\*4. Evening at friends' house (dinner and visiting, possibly playing cards), OR entertaining friends at your house for evening

\*5. Getting together with boys (poker, bull session, etc.) OR getting together with girls (bridge, hen party, etc.)

\*6. Square dancing or other community dance, picnic, supper and similar socials

(Choose as many single hours as you wish)

7. Spending an afternoon or evening at the club

8. \_\_\_\_\_  
(specify other)

**RECREATION AND RELAXATION**

**A. Individual Activity** (Choose as many single hours as you wish)

1. Relaxing, napping, looking through paper or magazine

2. Watching TV or listening to radio

3. Reading book, playing musical instrument, singing, listening to records (for relaxation)

4. Hobbies such as gardening, sewing, crafts, woodworking, bird watching

**B. Individual or Shared Activity**

5. Walking, strolling or window shopping (just looking)

(Choose by three-hour strips)

\*6. Movies

\*7. Going to a play, band concert, etc.

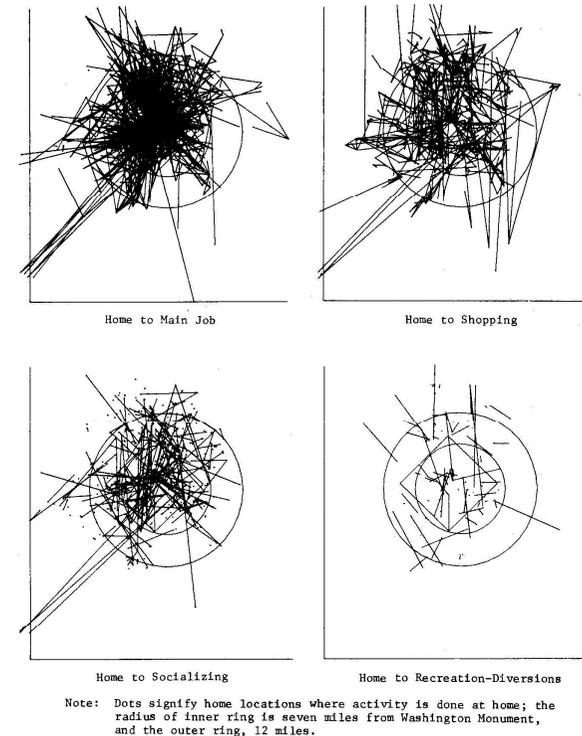
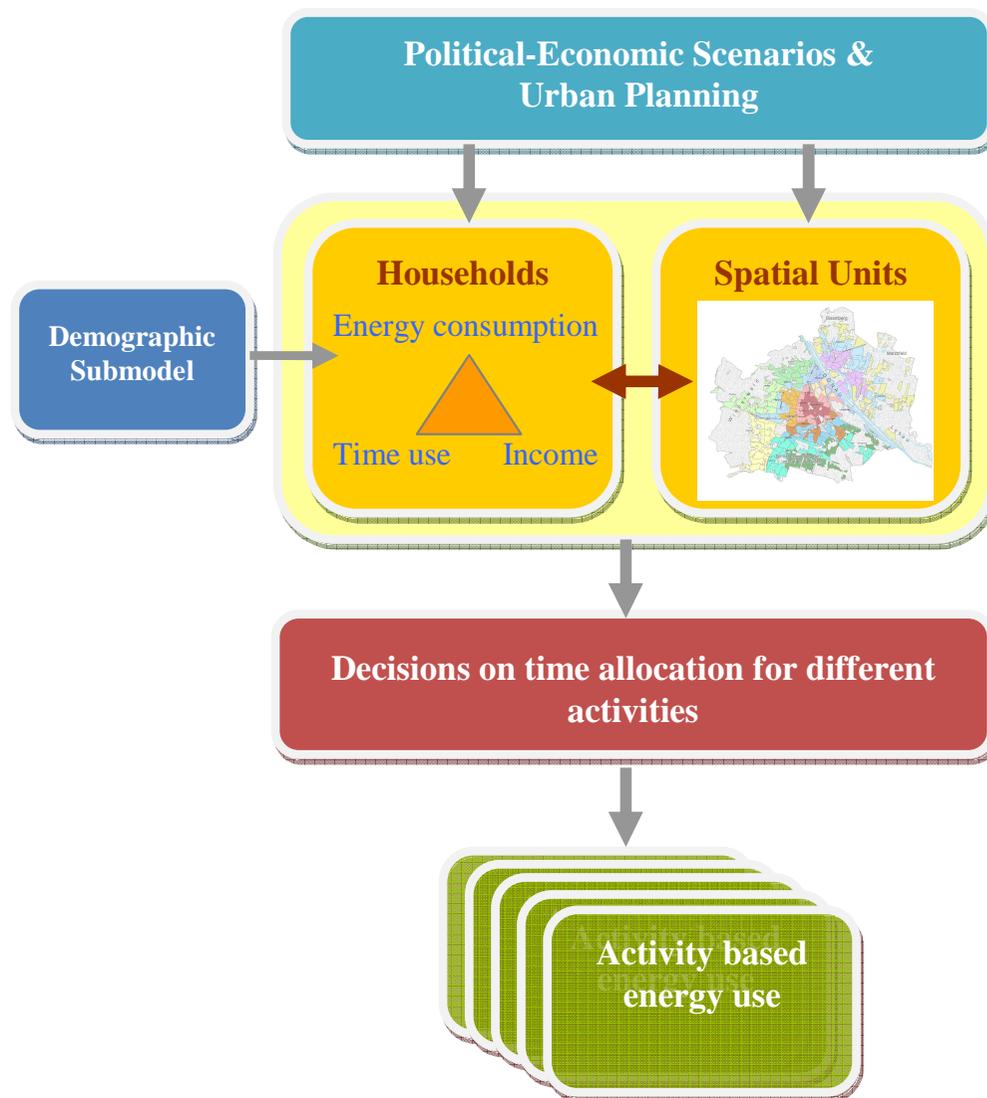


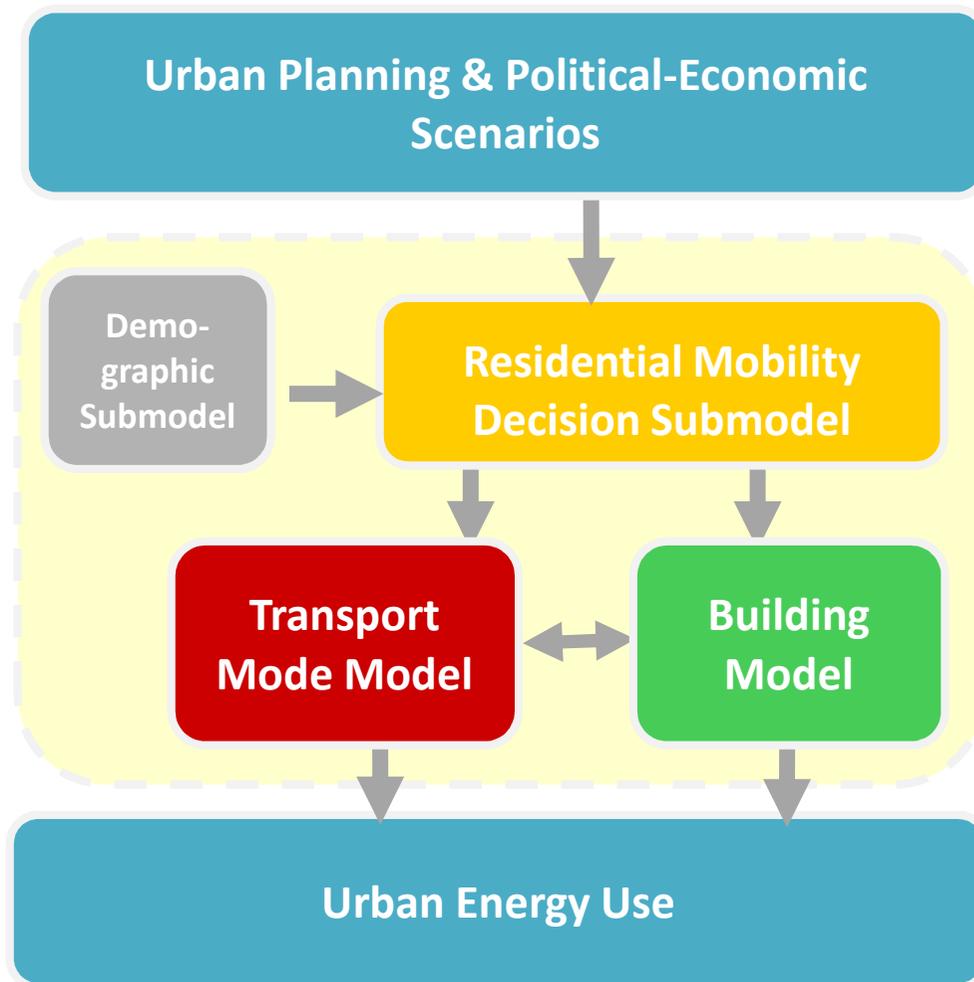
Figure IV-3 Computer printouts of trace patterns from home to work, shopping, socializing, and recreation—Washington, 1968.

Source: Chapin, Francis Stuart. 1974. *Human Activity Patterns in the City: Things People Do in Time and in Space*. Wiley.



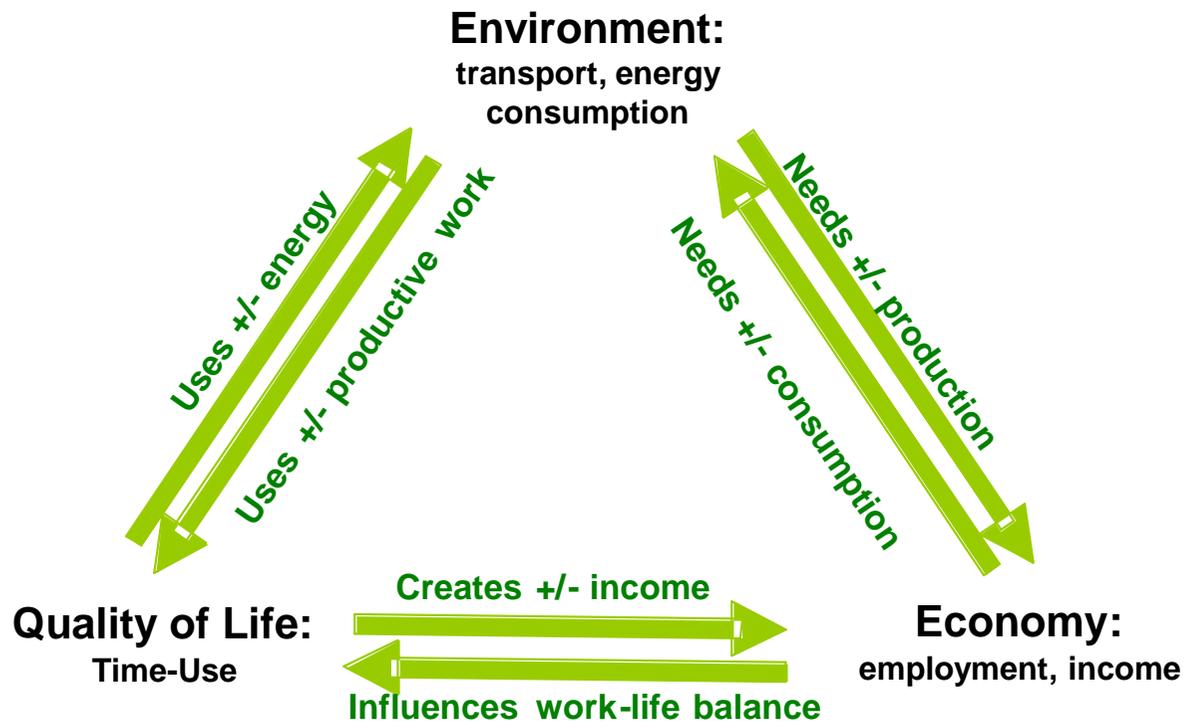
Overview of the UTE model concept

Gaube et al. 2011



Urban Metabolism Model  
Components

Smetschka et al. 2011



“Magic triangle of sustainability”

Smetschka et al., 2009

time-use categories	household activities [1]	necessary time depends on (e.g.)	decisions affecting energy-use (e.g.)	energy-use categories
travel time	mobility	travel distance	houshold type	transport
		transport mode	residential choice	
		number of ways	transport mode	
		socio-economic situation	lifestyle	
		gender		
working time	employment	n of persons employed	houshold type	transport
		working hours	residential choice	
		flexibility	transport mode	
		distance		
		socio-economic situation		
		gender		
care time [2]	family care	n of persons to care for	houshold type	heating [3]
		socio-economic situation	energy services	
		gender	building [4]	
personal time [5]	personal activities	other time categories	houshold type	heating [3]
		socio-economic situation	lifestyle	
		gender		
free time	leisure	socio-economic situation	houshold type	heating [3]
		gender	lifestyle	
[1] households: single young - couple young - little family - big family - couple old - single old				
[2] housekeeping, child care, geriatric care, social contacts				
[3] room-heat, cooling, warm water, power				
[4] construction year				
[5] sleeping, eating, body care, etc.				

## Linking time use and energy use

Haselsteiner et al. 2011

## Research questions:

- Is there a link between time-use patterns in a city and urban energy flows?
- How can time-policy measures in a city change quality of life, i.e. work-life balance, time-affluence, time-pressure, family life, educational situation, recreational situation and how do they affect energy consumption?
- Could an awareness of these interrelations help to improve spatial settings and infrastructures in cities, as a win-win connection between quality of life and energy savings?
- How can a socio-ecological model further our understanding of the interplay of socioeconomic and natural drivers (time-use patterns) influencing urban energy use?
- What is the potential of the developed simulation model to serve as decision support tool for municipalities, urban planners and traffic management?

**A momentary pause on a street corner in the heart of a city never fails to fascinate, whether in the thick of the rush hour, the dawning of a day, the late evening hours, a Saturday, a Sunday, or a holiday occasion.“ (Chapin 1974)**



Foto: picture alliance / dpa

# Thank you for your attention

For further questions, ideas,...please contact:

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