

Ageing of population and changes in mobility of the elderly and handicapped – COST 349 and SIZE

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Mobility of social groups

SIZE (Mobility of older people and Quality of Life)

ASI (Urban Planning and Land Use-Quality of Life and Implementation of the Programme "Cities of Tomorrow")

COST 349 (Accessibility of low-floor buses for people with limited mobility)

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Overview

- Ageing of czech population
- Mobility of ageing population
- Elderly and traffic safety
- Project SIZE
- And COST 349
- Conclusions



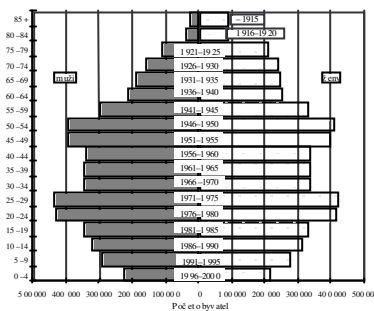
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Ageing of czech population

- average age in 1991 = 36,5 years
 - average age in 2001 = 39 years
 - average age in 2030 = 46 years
 - 22% to 27% of people in age 60+
 - or 17% to 21% in age 65+ in 2030
- (Source: CZSO)



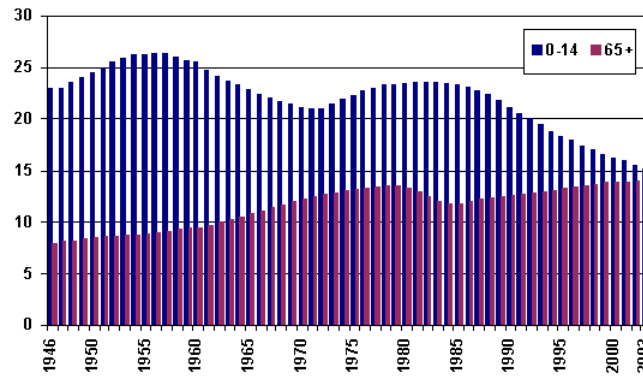
Fig. 1: Age structure of Czech population



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Ageing of czech population

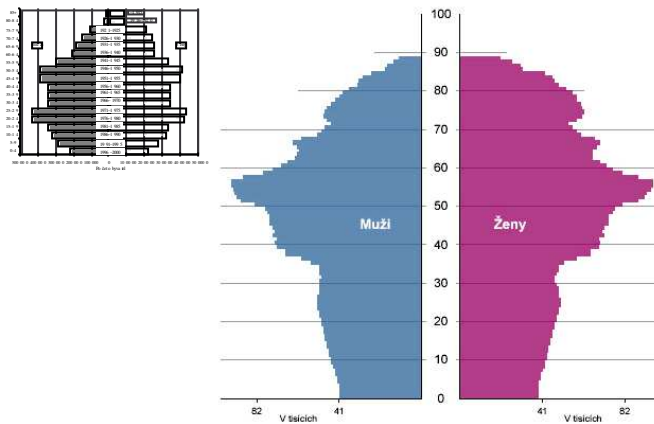
Percentage of population in the age groups 0-14 and 60+ between 1946-2001 (Source: CZSO)



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Ageing of czech population

Age structure of the population 2030 (Source: CZSO)



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Ageing of czech population

Life expectancy in the Czech Republic (Czechoslovakia)											
Gender	1920	1930	1945	1950	1960	1970	1980	1990	2000	2004	2100
Men	47.05	54.22	50.96	62.31	67.92	66.13	66.81	67.58	71.65	72.07	120*
Women	49.6	58.04	58.96	67	73.4	73.02	73.86	75.36	78.41	79.04	120*

Source: ČSÚ

**Prognosis of Czech Demographers:*

Conditions:

- Cancer will be curable
- Nanotechnologies will supervise the function of human bodies
- Cardiovascular diseases

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Ageing of czech population

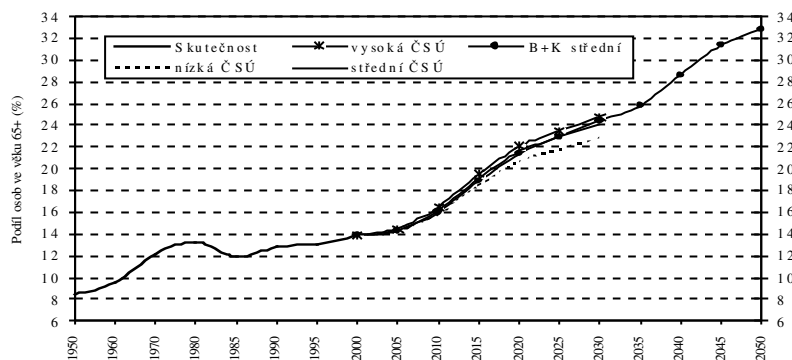
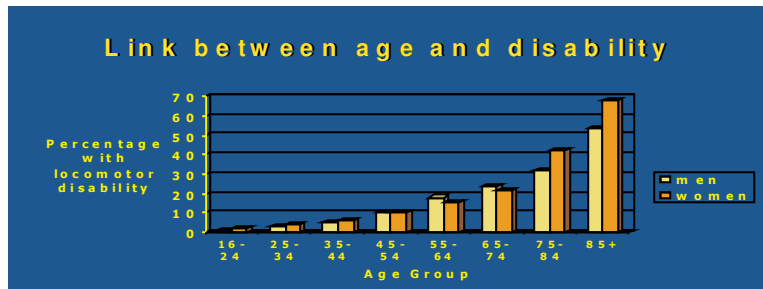


Fig. 2: Growing number of senior citizens aged 65+, projection according state authority CSU

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Mobility of ageing population

- **negative scenario** –
- hypothesis of the expansion of morbidity
- elderly people = people with mobility handicaps = massive increase of people with mobility handicaps
- main concept = accessibility



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Mobility of ageing population

- **positive scenario** – active ageing
- hypothesis of the compression of morbidity
- new cohorts of retirees after 2010: **selfconfident, educated, idea of active living in senior age**
- **strong mobility needs**, accustomed to car use
- increasing number of elderly drivers
 - problems with traffic safety



Mobility of ageing population

- **heterogeneity of the oncoming cohorts** of elderly people
- **seniors: 60 – 100 years of age** (life expectancy is still increasing)
- **differences between age groups** (different life experiences), education and socio-economic status differences

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Mobility of ageing population

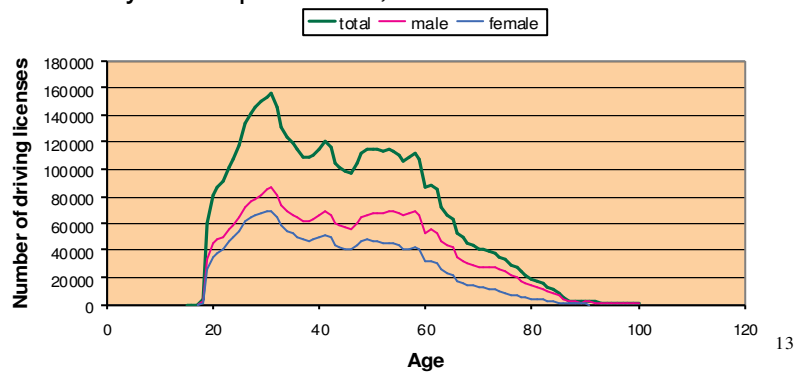
- mobility of the elderly tends to **increase** (new active cohorts of people are reaching old age)
- need to **be mobile** lasts also in retired age - pension
- **less driving licenses** than average population
- but **increase** of driving license among elderly people
- **increasing car use** among elderly



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Mobility of ageing population

- **less trips** than the economic active people because of reduction of traveling to work
- but non-working trips are constant till 75 years of age
- mobility = independence, acces to services



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Elderly and road safety



- drivers in age 60+ in Czech Rep. cause less than 6% of all accidents caused by car drivers (numbers change if we compare accidents of age groups according to vehicle/km)
- this age group owns 7,7% of driving licenses
- elderly are driving less:
 - a) they have less purposes to travel;
 - b) they are aware of weakening of their psychic and physical abilities

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Elderly and road safety

What represents the risks?

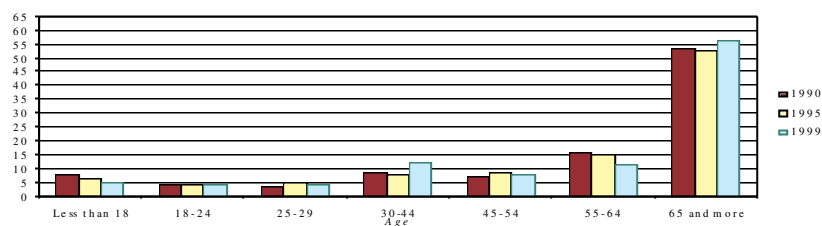
- physical changes in old age:
reduction of power and motoric abilities, diseases (diabetes, heart diseases etc.)
- psychic changes in old age:
worsening of sensual functions (sight, hearing), cognitive functions (reaction, concentration, memory, decisions)
- use of medicaments (side effects)
- but the seniors are aware of it – *they are using the car during the day, in good weather conditions and not in the traffic rush-hour*

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Elderly and road safety

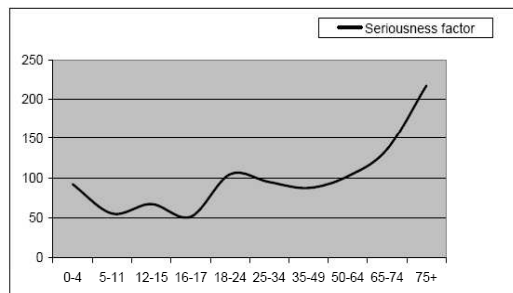
- elderly people are (besides childrens and young people) **the main vulnerable road users**
- **probability** of being injured or killed in traffic is higher than for rest of the population

Figure 3: Percentage of dead pedestrians depending on range of age



Elderly and road safety

- elderly people are (besides childrens and young people) **the main vulnerable road users**
- **probability** of being injured or killed in traffic is higher than for rest of the population



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Project SIZE

- SIZE is a project in the framework of the specific research and technological development programme "*Quality of life and management of living resources*", key action 6 "*The ageing population and disabilities*" in EU's Fifth Framework Programme
- explain and describe the present **mobility and transport situation** of the elderly
- **motivate action by the authorities** and other relevant groups
- **identify relevant solutions** for existing problems

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Project SIZE – results summary

- state of art study
- focus groups and in-depth interviews
- explain and describe the problems, needs and wishes of different groups of older adults – from their own perspective
- compare their views with those of various experts within each country
- results of qualitative part were used as a base for creating quantitative research instruments – questionnaires
- 4 dimensions: fears, quality of life, barriers, solutions

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Project SIZE – results summary

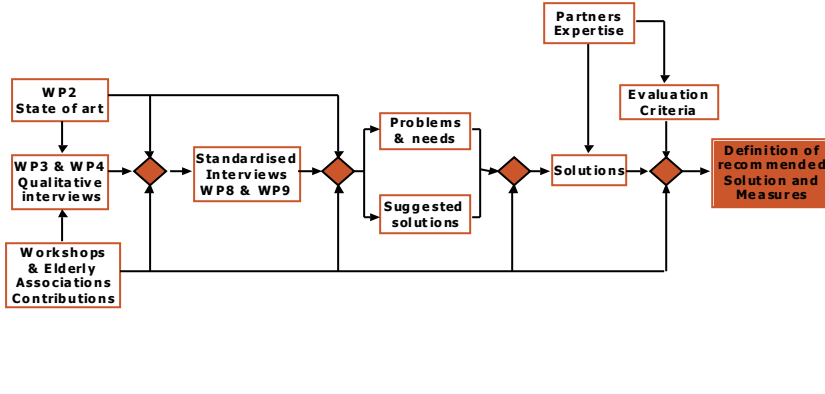
- sampling according the quota method
- i.e. sample representative for whole Czech population in age 65+ corresponding to sex, age groups (65-74, 75-84, 85+), education, regions, size of residence and type of household
- quota is based on 2001 Census made by Czech Statistical Office
- response rate 95% (450 total issued, 428 received questionnaires)

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Project SIZE – results summary

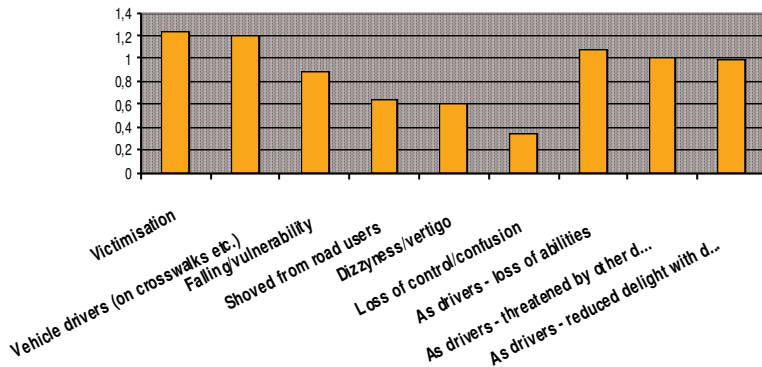
Workpackage 12: methodology

Inputs data



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Project SIZE – results summary

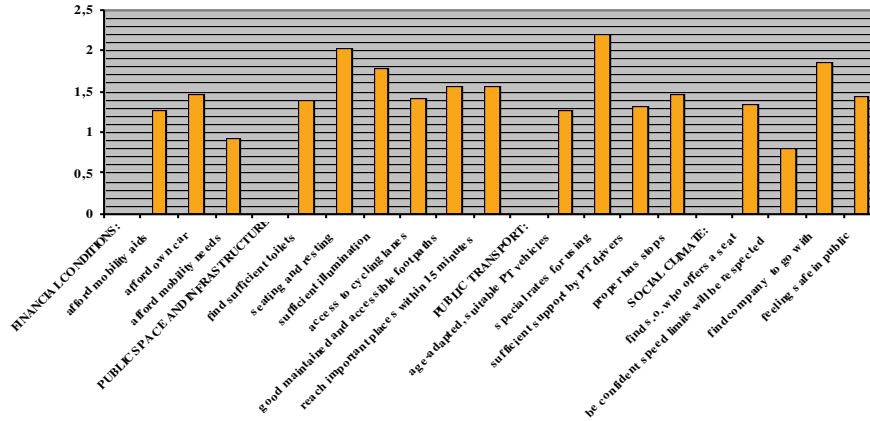


- all items means are higher than in the total sample
- women means are higher than the men means

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Project SIZE – results summary

Quality of life in relation to mobility

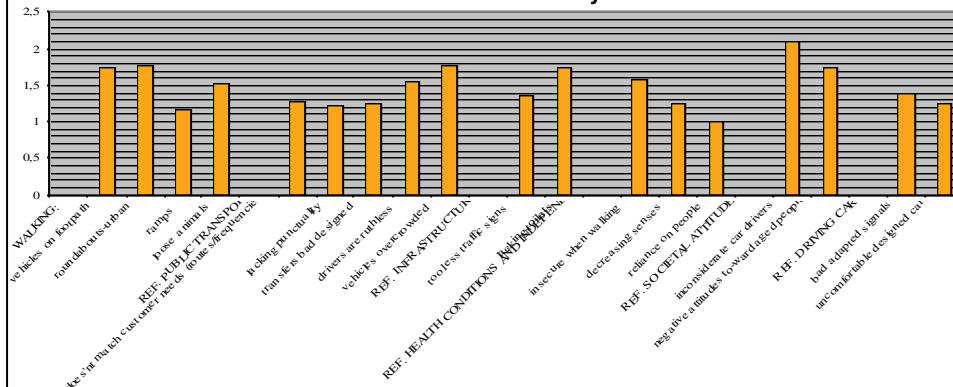


- Czech seniors see their quality of life in relation to mobility better, than the seniors in other countries
- exceptions: public transport and mobility needs

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Project SIZE – results summary

Barriers for mobility



- in comparison with the total sample **Czech seniors feel barriers intensively**
- biggest barriers for mobility are **attitudes of other members of society**
- walking: car traffic; **public transport: overcrowded vehicles, ruthless drivers**

Project SIZE – results summary

Solutions perceived by the Czech elderly as most urgent:

- traffic safety (reducing speeding)
- public transport (adapted vehicles, reducing the cost of publ. transport for the elderly)
- walking (improving pavements)
- adaptation of housing and public buildings for people with mobility handicaps
- increasing security and safety of older people.



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Project SIZE – results summary

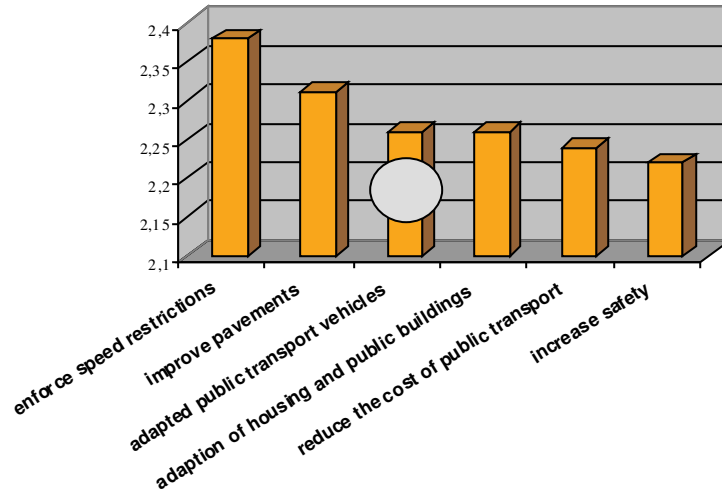
Solutions considered as not urgent:

- specific legislation and specific representatives of the elderly people in authorities
- or fitting the seniors out with cellular phones
- little need to reduce the distance of pedestrian crossings – could be assigned to the generally weak awareness of the influence of traffic calming and building measures for accessibility and safety of transport

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Project SIZE – results summary

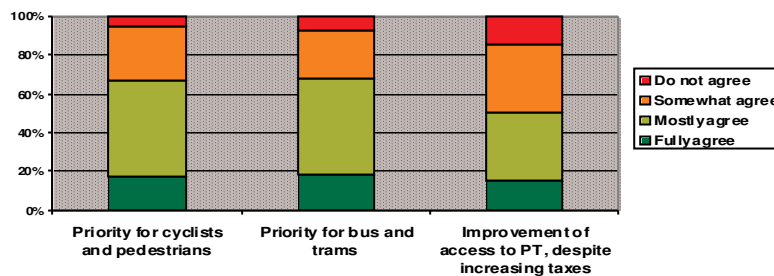
Six solutions perceived as most urgent



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Project SIZE – results summary

- **priority for cyclist and pedestrians in cities** was highly accepted by seniors in our sample (although bicycle is popular mode of transport mainly among seniors in villages or smaller cities)
- **priority for public transport in cities** got also high level of approval – public transport is one of the most used mode of transport among elderly people.
- **car traffic** is one of the strongly perceived **barriers** for mobility of the elderly citizens
- need to **reduce car traffic and car use**



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Fears

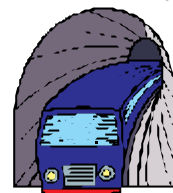
- seniors from our sample are not afraid of their own psychic abilities
- most fears of Czech elderly relate to safety and security of traffic.



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Quality of life in relation to mobility

- Czech seniors perceive it better than the senior citizens in other countries
- exception is the dimension of public transport – one of the most used mode of transport for Czech elderly people and they have considerable claims on it



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Project SIZE – results summary



Barriers

- main barrier for their mobility see the Czech elderly **in attitudes and behaviour of other members of society**
- they also – in comparison with the total sample – feel more intensively almost every barrier asked

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Project SIZE – results summary

Solutions

- preferred were solutions for **improving traffic safety, public transport and walking**
- **priority for cyclists, pedestrians and for public transport** in cities was preferred



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Conclusions

- *ageing of population: in considering change in travel behaviour we have to emphasize the issues of the elderly*
- 3 major themes:
- **traffic safety** – checking the physical and psychic capability to drive (but they are also the „vulnerable road users“)
- **accessibility** – of various forms of transport (and services) for the elderly
- **sustainability** – keeping the modal split
- *in Czech Republic NTS is not carried out – strong need of it – also in regard to the mobility of the elderly*

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Conclusions

- *ageing of population: in considering change in travel behaviour we have to emphasize the issues of the elderly*

Travel patterns differ from the rest of the population

- Routes - *differ significantly*
- Timing - *differs significantly*
- Modes – *interconnected, importance of walking*
- Equipment – *public toilets and other facilities needed*

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**FREE SERVICE
FOR YOUR EASY TRAVEL**

DP assistant



Who is a DP assistant?

It's an accompanying person of the commuters using the means of Brno public transport. They serve the people from the starting to the ending point of their journey, including transfers. A DP assistant also provides a personal help when entering the vehicle of public transport, assists in searching in a time schedule and helps people to orientate in the documents of contractual transportation conditions.

Everyone can rely on the assistant's help during the potential unexpected events.

We provide this service from Monday till Friday from 6 am till 6 pm.

After an agreement, the service is available apart from this schedule.

For whom is a DP assistant?

This service is provided to commuters with the valid traveling ticket for the planned journey, particularly to elderly people (over 75 years old) and disabled persons.

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Low-floor bus with DP assistant in Brno



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Low-floor tram in Brno



Low-rise tram in Prag



Intermodality for Seniors Comfortable access to the public transport bus and tram in Brno



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Orientation Bus stop in Liberec

Timetables.
Schedules:

Visible,
Big letters

Places to rest



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Thank you for your attention

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