

# **Linz Charter – Guideline for Urban Development: Architecture, Traffic and Urban Planning have become “Deaf” Disciplines in which Acoustic Consequences are Treated Without Concern**

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## **1 ACOUSTICS: A TOPIC OF THE CITY OF THE FUTURE?**

Why should acoustics become a topic of the city of the future?

- Because our acoustic living environment has been radically changed by technical revolutions and requires new patterns of behavior.
- Because our ears are open 24 hours a day – from the 50th day after conception to our last breath of life, every day, every minute, every second, without interruption.
- Because access to our body is possible through the ears without interruption – just as through the respiratory organs.
- Because permanent stress due to noise and background music is just as harmful to people as brief periods of peak stress.
- Because hearing damage is accompanied by the risk of damage to the sense of balance and orientation, which are also located in the ear.
- Because people cannot defend themselves against acoustic dangers, because hearing, balance and orientation are unconscious processes, just like breathing.
- Because every person has a right to an acoustic environment that does not cause health damage.
- Because every type of construction and urban planning is acoustic design, regardless of whether this is done consciously or unconsciously.
- Because noise impinges on children’s ability to learn in school. Scientific studies have shown that students’ performance drops by 10 to 25 percent even with moderate background noise, and permanent noise can increase hyperactivity and weak concentration among children.
- Because “noise impaired hearing” is the most frequently occurring recognized occupational disease.
- Because noise has such a massive impact on the human circulatory system that according to an estimate by the German Federal Environmental Agency about 4,000 heart attacks each year in Germany are due to traffic noise.
- Because the acoustic living environment is increasingly becoming a characteristic of social differentiation (“those who are poor, live with noise”).

So we can say that acoustically aware planning is worth the effort:

It is worth having environmental psychologists take an early look at the architect’s blueprints. The increase in productivity that is later reflected in lower fluctuation, less sick leave and greater attractiveness for new employees far outweighs the original effort.

From the newspaper: Frankfurter Allgemeine Zeitung, 18. 11. 2006

## **2 HÖRSTADT: ACOUSTIC CITY**

### **2.1 Our acoustic space**

In acoustic space our living conditions become concrete, both directly and – because we cannot turn off our hearing – unavoidably. Nevertheless, acoustic awareness is still seriously underdeveloped in our society. Traffic noise sounding everywhere has flattened the once individual soundscapes of the cities into a monotone roar, which no one can overcome even with the most expensive noise pollution control measures. Architecture, traffic and urban planning have become "deaf" disciplines, in which acoustic consequences are treated without concern. The technical revolutions of recent years have made possible the emission of sound at all times and in every place, which is accompanied by an economization of hearing: Products from cars to cookies have long since also been acoustically designed to suggest or express quality, while corporations

have moved to acoustic styling to avoid the increasing ineffectiveness of conventional advertising due to visual over-stimulation. Supermarkets, businesses, shopping centers, restaurants, waiting rooms, telephone on-hold systems and even toilets subject millions of citizens every day to a more or less intentionally imposed environmental noise with music.

All of this happens outside the realm of noise pollution legislation in the narrower sense in a legal vacuum. We experience the Wild West of hearing, in which there are practically no binding rules of the game for how people live together acoustically in a democratic society.

## 2.2 Hörstadt: Acoustic City

Acoustic City is an initiative developed in the year of Linz 2009 European Capital of Culture for an arrangement of our audible living environment appropriate for human beings and in keeping with human dignity, developed for our acoustic space.

Acoustic City is an idea: people are deeply touched and affected by what they hear. Because three existential senses are united in our ears: the sense of balance, the sense of orientation and the sense of hearing. For this reason, human beings have a right to an acoustic environment that does not make them sick – due to noise, acoustically inadequate architecture and permanently imposed music. People have the same right to this as to clean air and pure drinking water. Making acoustic space liveable and worthy of a civilized democratic society is a political task, - and of course a task of urban development and planning. This means much more than noise protection and prevention of noise pollution.

## 2.3 Is anyone allowed to use two entrances to our body without asking?

The city has always been a loud place, and surprisingly, it is relatively certain that cities in the 19th century were louder than the cities of the present. However, their sonic diversity was richer and not yet dominated by the noise of motorized traffic that sounds the same everywhere.

Our sense of hearing can deal with heavy acoustic strain, but only as long as it also has times and zones of quiet to regenerate. The successive disappearance of quiet phases and peaceful space due to permanent traffic noise, due to background music from the supermarket to the restrooms in restaurants, and the constant use of headphones leads to strains that are more than we can anatomically and mentally cope with. The consequences are cardiovascular diseases, stress, hyperactivity among children, decreased performance, irreversible hearing loss for every fourth young person.



Foto: Gerd Langer

## 2.4 „Ruhepol“ the Center of Calm

With the “Ruhepol” Center of Calm at the cathedral Acoustic City operates a exemplary quiet space that is publicly accessible free of charge. It is located in the steeple of Austria's largest church, the Cathedral of Our Lady. This space has unique measurements and equally unique acoustics.

## 2.5 „Beschallungsfrei – Zone Without Background Music“

Imposed noise with background music in countless spaces of the public sphere, from the meat counter to the restroom, is a violation of the elementary right to bodily sovereignty – a heavy mental burden for retail employees unremittingly exposed to it and dubiously patronizing towards citizens for economic motives. The label “Beschallungsfrei – Zone Without Background Music” designates spaces that dispense with imposed noise. This decision is not only a valuable contribution to maintaining the health of our hearing, but also to upholding our human rights. The campaign “Beschallungsfrei” is conducted together with unions and churches.



Foto: Pondell

Since Autumn 2008 major public administration offices in Linz and Upper Austria designate their spaces as free from imposed noise to set a good example.

## 2.6 The Akustikon

The Akustikon – World of Hearing is a house of hearing and a research and education and consulting center for acoustic issues in our society. The central aim of the Akustikon is to raise awareness for the sense of hearing in our society and to place hearing in a socio-political context.

The five guidelines of the Akustikon are:

Free hearing, which means that in the Akustikon people open themselves up to the world through their ears and hear freely. Not isolation from the world, but becoming immersed in the world is the program. For this reason, there are no headphones in the Akustikon.

Hearing as a trinity, which means that the Akustikon focuses on the ear as a holistic sensory organ. This applies to all three senses located in the ear – balance, orientation and hearing.

Monomediality, which means that sound is neither prepared in a purposely visual way nor placed in a synaesthetic context.

Learning to hear is learning to think is the motto. The Akustikon is a school of hearing.

Spatial diversity means striving for a diversity of spatial structures in all aspects (size, form, material) to enable experiencing spatial perception as a function of the act of hearing.

## 2.7 Architecture designs acoustic environment.

The architecture, in which we live and work, is a substantial factor for our acoustic wellbeing – the acoustics of every building are created along with the building itself. Unfortunately, the conscious planning and design of acoustic conditions plays no more than a marginal role either in theory or in practice. Parallel, smooth, vertical walls and facades, hard and highly reflective building materials transform entire streets into canyons of noise, resulting in spaces where we do not feel comfortable, where we cannot follow a conversation or can neither concentrate nor relax.

Acoustically building correctly means grasping the building as a unit because acoustically, building the building itself can cause the most damage. Poor planning for conduits for water ventilation data, and electricity can make life a living hell. Undesired noises are reinforced and unintentionally passed on over long stretches. This means social conflicts are inevitable.



Foto: Pondel

A vision of urban planning: parallel buildings along traffic routes veritably captures the sound waves of noise. They are constantly bounced from one surface to another, endlessly reflected and amplified. Curves or slanted surfaces allow the sound to escape and reduce noise pollution. This knowledge was already put into practice in the Renaissance. In many North Italian cities the main thoroughfares are arranged in slight curves. Here a study of the street Elisabethstrasse in Linz.

### 3 THE LINZ CHARTER

#### 3.1 Acoustic space planning

Initiated by Acoustic City, on 22 January 2009 the City of Linz passed the Linz Charter: it is an attempt to imagine urban development acoustically and to compile a catalogue of goals and values for city life and urban design in an acoustic sense, so that acoustic criteria play a central role from construction and commercial regulations to traffic planning and area planning all the way to the conscious design of the sound environment. Linz is thus the first city in the world to address acoustic concerns at the political level. The Linz Charter is the basis for developing a branch of research we may call acoustic space planning.

The wording of the Linz Charter:

The City Council of Linz resolves upon the following ‘Linz Charter’ and invites other cities to join it.

#### LINZ CHARTER

Acoustic space is everything we hear. In it our living conditions become both concretely direct and – since we cannot turn off our hearing – unavoidable. Acoustic space can be formed. It can be designed, cultivated and developed.

We recognize acoustic space as an elementary component of our habitat and commit ourselves to taking into consideration the following values in designing and developing it:

- Acoustic space is a public good. It belongs to everyone.
- The arrangement of acoustic space is the right and the concern of all people. Participation in this requires equal opportunities.
- Participation in acoustic space requires the right to acoustic self-determination and the development of a sense of acoustic responsibility.
- Cities are places of acoustic diversity and acoustic richness that should be open to all without barriers.
- In acoustic space people also have the unlimited right to personal physical sovereignty and the right to personal health.

Based on these values, we are oriented to the following goals:

- We want to enable and foster acoustic diversity and richness of sound.
- We understand construction, traffic and urban development processes in our city also as acoustic processes.
- We want to keep all publicly owned spaces, including all public transportation, free from permanent noise imposition.
- We seek a reduction of noise imposition in the public sphere for the protection of workers and consumers.

- We want to ensure full public participation for all hearing-impaired persons.
- We call on all educational institutions – especially kindergartens – to focus on the acquisition of auditory skills in their work.
- We want to promote responsible, innovative and socially engaged acoustic behavior and take new directions in fighting noise pollution.

With the “Linz Charter” we make hearing one of the core areas of our politics and invite other communities to join the “Linz charter”. We appeal to law-makers to take acoustic space into consideration as a central area of life. We do so in the knowledge and the conviction that human beings are influenced and touched by what they hear even in their innermost being.

Acoustically aware action creates quality of life and fosters individual participation in social communication.”

#### **4 WHAT DOES THE CITY OF THE FUTURE NEED?**

A different and thus acoustically less stressful mobility, a knowledge and appreciation of its sonic richness, a consciously acoustic design of living spaces, an experimental and creative way of dealing with noise, building construction appropriate for our sense of hearing, a sufficient number of zones free from imposed noise. A sonic map of the city that also ensures social justice in terms of acoustics, so that poverty is not equated with living in the noisy zones of the city.

The city of the future needs an acoustic space planning.

The Linz Charter can be the basis.

[www.hoerstadt.at](http://www.hoerstadt.at)