

Photo: 3deluxe, photographer: Sascha Jäntke



In our own space Parking space is an essential component of urban life and of mobility. With this edition, WÖHR celebrates its 120th anniversary and examines the megatrends that are transforming our world, and will continue to do so in the future. Mobility, individualization, connectivity, urbanization, neo-ecology, and globalization are among the multifarious dynamics of change that are shaping the city, parking space, and WÖHR in the 21st century. Public space, the sustainability of parking systems, and mobility behavior play vital roles for our planet – and for quality of life.

The management team at WÖHR Autoparksysteme GmbH

## Move Along Please!

Growing cities can no longer accommodate extensive parking areas or underutilized parking garages. Public space can be better used – for residence, leisure, recreation, renaturation, and for coping with the climate crisis.

Weert Canzler

**A** glance at the streets and squares of any city suffices: There are just too many cars. And too many of them are large, heavy, and inefficient. Every year, more and more SUVs – along with their derivatives in smaller vehicle classes, all striving to be bigger, higher, heavier – are being purchased. Nor does the electrification of the drive system alter anything. The result is catastrophic and shortsighted in every respect: The manufacture of large automobiles requires too many scarce resources and excessive energy, and to make matters worse,

they represent a safety risk, in particular for nonmotorized traffic. Not least of all, they require more parking space than smaller vehicles. All of which is well known.

### Precious Space

A future sustainable transport system requires more than simply different drive systems: Genuine transformation is far more ambitious. The transport system as a whole must change, if only because our burgeoning motorized individual transport claims far too much public space. In all of the world's metropolises, individual transport has long since reached feasible limits – or surpassed them. Contributing as well is commuter traffic, which has ballooned decade after decade, propelled to some extent by the separation of residence, work, consumption, and leisure activities. Now, the COVID-19 pandemic has made us aware that things could be different. Working at home and decentralized work are practicable options. At the same time, an enhanced urban quality of life is possible only with fewer automobiles in public space, less noise pollution, and more intermodal mobility options.

In German cities, and in other countries that experienced motorization early on, the planning ideal of the “car-friendly city” has long since become passé.

Meanwhile, the introductory chapters to urban development plans have started to sound very similar: All proclaim the curtailment of the automobile, the promotion of public transport, and, in most

“The transport system as a whole must change, if only because our burgeoning motorized individual transport claims far too much public space.”

cases, of “active mobility” as well, meaning pedestrian and cycle traffic. But the reality usually fails to measure up. Even in cycling strongholds like Münster or Freiburg, or a public transport mecca like Vienna, multilane motorways slice through public space, and parking spaces gobble up precious surface area. On average, a private auto remains parked

for more than 23 hours daily. Often, a genuine cultural battle is triggered when a municipality seeks to limit public parking, making surface area available for utilizations other than the haphazard storage of private vehicles. Affected motorists feel deprived of their customary rights and protest loudly, often with the support of populist parties and the media.

### Mitigating Climate Change

In times of intensifying urbanization and a worsening climate crisis, there is enormous and mounting pressure to use public space more productively. No growing city can afford poorly remunerated parking garages – nor underutilized parking spaces – nor underutilized parking garages. It is a question first of increasing the cost recovery rate through the systematic, cost-oriented management of parking space. Estimates put the European rate at just 23%. And it is a question secondly of a more sustainable use of public space. It makes little sense to allow an underutilized private automobile to occupy a minimum average of ten square meters of public space free of charge or for a symbolic fee, devouring surface area that could be used for dwellings and schools, but also for urban leisure and recreational activities.

Above all, it is a question of mitigating the impact of climate change on cities. Which becomes possible only by converting street and parking surfaces to unpaved surface area in order to introduce more vegetation, at the same time allowing the seepage of precipitation. Urban heat islands are hazardous, and are becoming more prevalent. It makes an enormous difference whether the street surface is occupied by automobiles or shade-giving plants. Heavy rainfall must be allowed to drain away and seep into the earth. All of this requires space – which cannot, however, be blocked by stationary vehicles.



# 2 | ENCOUNTER

## We Aim to Make Parking Simpler and More Communicative!

Rather than seeing itself simply as a manufacturer of parking systems, WÖHR aspires to be a part of our future mobility. Boris Schade-Bünsow in conversation with shareholder Daniela Wöhr and CEO Markus Hofheinz: on quality of life, sustainability, networking, individualization, and value creation.

**Boris Schade-Bünsow: Congratulations on your 120th anniversary! WÖHR was founded in 1902 as a metalworking shop. What was manufactured back then?**  
Daniela Wöhr: My great-grandfather, Johannes Wöhr, produced carriages

and repaired agricultural equipment. In 1932, my grandfather, Otto Wöhr, took over the firm, and transformed it from a metalworking shop into a locksmith's shop. During World War II, he produced air raid doors and other types of doors.

**How did you come to begin manufacturing parking systems in 1959?**

Daniela Wöhr: After the war, my grandfather began a search for new ideas and new products. He had manufactured electric stoves, and in 1959, he developed a driveway ramp with rails, and installed the first parking system with a platform. Later, in order to conserve floor space, a parking system with two platforms was developed from the single platform system.



Photos: Arne Hartenburg

**Back then, the car-friendly city was a guiding principle, while today there is a desire to avoid allowing parked vehicles to encroach upon urban space. The number of automobiles is growing steadily. How does WÖHR respond to this dilemma?**

Markus Hofheinz: Here, the necessity for densification becomes ever greater. Our solution is densified parking space. We are replacing poorly utilized, ground-level parking areas with efficient, compact, subterranean parking facilities. This frees up urban surface area for use by people.

**Does this represent a perspective for the future of parking in cities?**

Markus Hofheinz: In some districts in central Madrid, small and medium-sized parking systems have been distributed – so-called “microparking” – in place of a single large parking garage. This allows residents to park near their homes while avoiding searches for parking places. Here in Germany as well, much could be done in city center districts. In

the future, we aim to make parking simpler and more communicative. We strive to enhance quality of life through simple and comfortable parking options.

**Street space is made available by city officials at various prices – a parking permit, for example, cost far less than a booth at a weekly market. Is parking too inexpensive currently?**

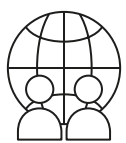
Markus Hofheinz: Everything must have its price – anything that costs nothing is worth nothing. A mere €20 for a monthly or even annual parking sticker is clearly too little. For us, the question is: How do we create parking space that is affordable, but at the same time generates profit for investors, so that their financial involvement makes sense?

**WÖHR has a sustainability certificate. But automobiles are usually perceived as antagonistic to sustainability. How do the WÖHR parking systems contribute to sustainability?**

## WÖHR and the World

1900

The world population is 1.65 billion



1902

Establishment of the Wöhr metalworking shop



Photo: Renault Cars product lines at the Boulogne-Billancourt Renault Plant. The U.S. National Archives

1950s

Commencement of mass motorization and a substantial increase in petroleum consumption worldwide



1972

The Club of Rome publishes the study *The Limits to Growth*



Photo: IBM Personal Computer on display at the Musée Bolo, EPFL, Lausanne. Rama & Musée Bolo (CC BY-SA 2.0 FR)

1981

IBM constructs the first personal computer (PC)



Photo: Gutfeld & Shook. Copyright Gutfeld, Library of Congress

1910

Inception of the mass production of automobiles

1927

Otto Wöhr Senior passes his master craftsman's exam to become a locksmith

1959

Construction of the first parking system

1962

Introduction of the electromechanical parking system Type 100



1966

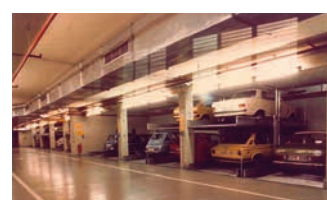
Development of the DOGA 13

1973

Oil crisis

1976

Introduction of the “Parklift” series of models



1983

Motorola produces the first mobile phone

1985

The Parklift 422 is installed outside of Germany (in Zürich) for the first time



Markus Hofheinz: When parking is densified, it requires less built surface. With the foundation pit, with excavation work, and in particular when it comes to concrete work, there is a large reduction of CO<sub>2</sub>. Now, we've generated the first EPD, an environmental product declaration, for the PL450 system. With this document, we have expanded our vision and our understanding of the environmental impact of our products during their full life cycles.

**What is the impact of other societal tendencies such as individualization on mobility, for example intermodality?**

Markus Hofheinz: People want flexibility, and in my view, that's the most important thing. People want to organize their own transport, their own mobility. That also means using an automobile when necessary. Intermodality relates to the individual's life phase or lifestyle, whether you're single or have children, for example. And there's also the issue of a well-functioning public transport system. When it comes to mobility, "one size fits all" doesn't work. Intermodality could be strongly encouraged through networking, with a booking system that can manage all options simultaneously. Daniela Wöhr: Intermodality also depends upon where you live. In the city center, in large metropolitan areas, car-sharing is certainly simpler. In the countryside, you're more dependent upon an individual vehicle.

**How has parking changed as an individual experience?**

Daniela Wöhr: Earlier, subterranean garages were poorly lit, dark-gray concrete holes. They have meanwhile become

“We strive to enhance quality of life through simple and comfortable parking options.”

“We are not offering a makeshift solution, but instead a superior model in relation to conventional parking.”

more attractive. Whether it's a question of residential parking or the subterranean garage of an apartment building: they are well lit, and have more appealing colors. We have developed color concepts, wider platforms, greater distances between platforms, and ground-level accessible platforms for our parking systems. All of these measures are designed to improve user comfort.

**Where is the principal market for WÖHR products, and where are potential markets located?**

Markus Hofheinz: Today, about 50% of our sales take place in Germany. Currently, we're striving to establish a more international profile. In northern Eu-

rope and America, we're making progress at the moment. In other countries, there is less of a demand for our parking systems. Our message is: We are not offering a makeshift solution, but instead a superior model in relation to conventional parking. Our market is found wherever many people live together. In

**Are your international customers sensitized to the organization of efficient parking?**

Markus Hofheinz: Our success is a function of the identification and commitment of our local partners. We don't expect to get a foothold in a country where 100 different vendors already offer systems at diverse quality levels. In China and Singapore, we have a va-

riety of flagship projects, such as our 200-meter-tall sky garages, featuring automobiles on the apartment levels, or in Melbourne, a project where cars can be parked behind the living room wall. But of course, these are special projects, not the general market. For us, opportunities are found in countries where

**Looking now toward the future: Where will WÖHR be five years from now?**

Markus Hofheinz: I'm convinced that in five years, we'll be further along with the networking of parking systems in buildings, but also with user apps. Our focus will be more on end users. Today, the focus is on the purchaser of the system, which as a rule means a property or real estate developer, but not the user.

Apart from that, and going beyond the sales of our parking systems per se, I'd like to give some thought, together with our team, to different models of value creation and business models. For example to the operability of parking systems, and to flexible user options. Let's say you have an apartment building in a city center location. During the week, the office workers park there, but on the weekend, it stands empty. Can we find an alternative use for it on weekends? Making it accessible for supplemental uses, including private transport, so that the parking spaces aren't wasted?

**... And where do you hope to see WÖHR as a family-run business in five years?**

Daniela Wöhr: The strategic orientation of our parking systems, connectivity, and operator models are major themes for us. All of WÖHR's shareholders are family members. We want to further expand our facility here in Frielzheim, which can only succeed in conjunction with our valued employees. With their knowledge and expertise, they are our most important strength, and without them, all of them, nothing would function.

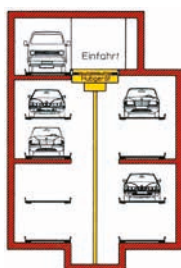


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**1986**  
Wöhr installs the Parklift 422 in Asia (Malaysia) for the first time

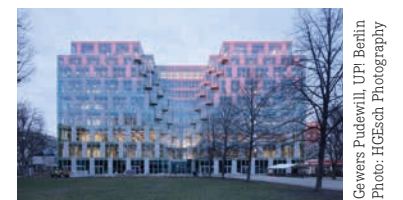


**1988**  
The evolution of automatic parking systems begins with the WÖHR Parksafe 580.

**2006**  
1.2 billion people now have access to the Internet

**2007**  
The iPhone comes onto the market

**2010**  
All of WÖHR's parking systems pursue the idea of "green parking": space-saving systems technology is employed in order to maintain green spaces

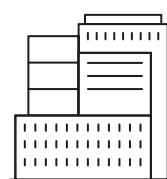


**2021**  
UP! Berlin Winner ICONIC AWARDS: Innovative Architecture 2021. Installed in the building is the Combilift 551 parking system by WÖHR

**1987**  
The first edition of WÖHR's customer magazine *Parklücke* appears

**1991**  
Launch of the World Wide Web, developed by Tim Berners-Lee

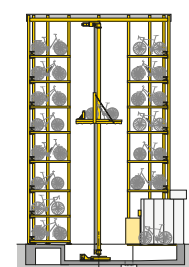
**1996**  
WÖHR is the first firm in its sector to launch itself on the World Wide Web



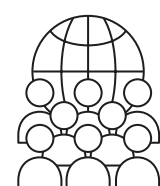
**2008**  
50% of the world's population now lives in cities

**2012**  
There are now 400,000 parking spaces worldwide

**2014**  
The automatic bicycle parking system is a milestone in the history of mobility

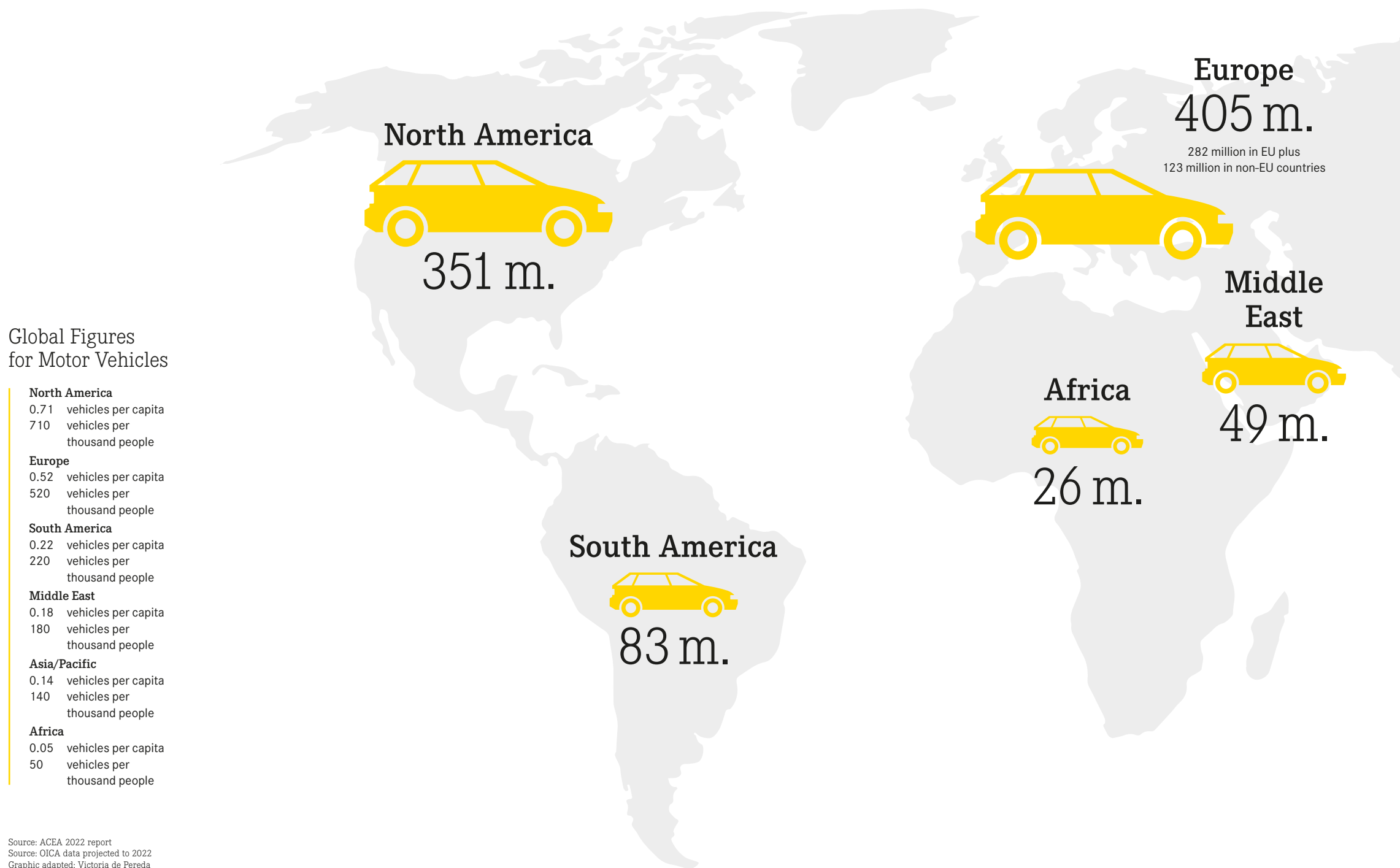


**2022**  
There are now 8 billion people living on the Earth



120 years

# In the Product Loop



**W**hat is an Environmental Product Declaration (EPD)? It is an internationally standardized environmental declaration for products, based on life-cycle analysis, and carried out transparently by an independent and recognized actor. The life-cycle analysis evaluates all of the product's potential environmental impacts during its full life cycle, from manufacture to disposal. Among other things, this includes contributions to greenhouse gases, ozone loss, and acidification, as well as to the elevation of phosphate levels in bodies of water.

The analysis considers the product in various phases: during production, assembly, utilization, and disposal. There is also a fifth focal area that considers the positive and negative environmental impacts occurring beyond these life phases. This area is intended exclusively for informational purposes, however, and does not contribute to the product evaluation. The EPD is standardized in accordance with EN 15804. This ensures that various products can be compared with one another with regard to environ-

mentally relevant information. And although the EPD is often perceived as an "eco-label," it provides no information about the attainment of minimum values, and instead features the objective results of the life-cycle analysis.

#### No Waste

The first European Climate Law, adopted in 2020 by the European Commission, provides legal anchorage for the goal of a climate-neutral EU by the year 2050. By 2030, moreover, net greenhouse gas emissions are to be reduced by at least 55% in comparison with 1990. This ambitious aim is to be achieved, among other things, through the transformation of the industry to a more sustainable model, based on the principle of a recycling or closed-loop economy. The recycling economy pursues four main goals:

1. the optimization of resource use
2. the minimization of the extraction of raw materials
3. the maintenance in use of products for as long as possible
4. the prevention of the emergence of negative external effects

Enterprises convert their systems to a recycling economy by renouncing a linear business model, according to which products are manufactured from materials and then disposed of at the end of their useful lives. Instead, firms make the transition to circular production, with intelligent design ensuring that products and parts can be repaired, reused, or recycled.

*"The mechanized PL450 parking system is designed to be durable, repairable, and recyclable."*

This means that resources – products, parts, materials, and energy – must remain in closed cycles for as long as possible. After being dismantled, they are gathered and processed for recycling, which reintroduces them into networks

of economic production. The idea is based on natural processes, where no conception of "waste" even exists. Residual materials left over from one process serve as the components of the next, so that a closed cycle results. In today's construction sector, however, very few construction components from dismantled structures are recycled for comparable utilizations. In the future, it is important that a building's ultimate decommissioning be considered already during the development and processing of products.

#### The Sustainability of Parking Systems

Today, 57% of the Earth's population lives in cities. By 2030, this will rise to around 60%. One of the challenges accompanying urbanization is motorization. Approximately one-seventh of CO<sub>2</sub> emissions worldwide come from transport activities. The World Economic Forum believes that by the year 2040, the number of automobiles will rise from 1.5 billion to 2 billion. Here, automated parking systems (APS) can make an important contribution to sustainability:

1. Automated parking systems represent a far smaller environmental

burden than conventional garages: A study by EEA Consultants Inc. compared the environmental impact and energy characteristics of a conventional vehicle garage with the data of an APS having the same capacity. The results showed that CO<sub>2</sub> pollution and fuel consumption for the APS was around 80% lower.

2. Space efficiency: The APS plays an important role here by reducing the built surface area and enclosed space per automobile. An APS can more than double the number of automobiles compared to a conventional parking garage. Thanks to their minimal dimensions, moreover, underground parking becomes more cost-efficient than traditional subterranean garages. This makes it possible to optimize the utilization of urban surface area, maximizing green space, open residential areas, and sunlight exposure.
3. Efficient resource usage: The smaller the building, the fewer construction materials and waste are involved. Smaller buildings, more-



How can parking systems contribute to sustainability? The Environmental Product Declaration for the Parklift 450 parking system by WÖHR renders the environmental product's impact visible. Efficient resource use is capable of transforming the industry.



over, means the displacement of less earth mass, which means shorter, more efficient construction schedules. At the same time, less or no energy is required for illumination, ventilation, security systems, and passenger elevators.

#### Recycling

The use of the EPD is especially prevalent in the building sector, and the system is more developed than in other areas. The life-cycle analysis of the PL450 parking system by WÖHR shows that the greatest environmental impact occurs during the production phase; occurring here are most CO<sub>2</sub> emissions, 99% of abiotic resource depletion, and 54% of ozone depletion. High emissions occur mainly during the energy-intensive extraction of raw materials used for the components – manufactured primarily in steel – of the PL450. The results take into account the processing of raw materials, as well as the energy production required for the production plant, including steel galvanization, welding procedures, and packing materials.

The mechanized PL450 parking system is designed to be durable, repair-

able, and recyclable. The galvanized steel structures and elements are made of circular materials. The structure is designed to last for 20 years without maintenance. The steel structures of the WÖHR Parklift 450 are finished with hot dip galvanizing, which provides strong corrosion protection. Once the reutilization process has finished, the steel and zinc together enter normal steel recycling processes. The zinc does not lose its properties, and can be returned to the galvanization process. Steel is entirely recyclable. Nor does it suffer any diminishment of quality after being recycled multiple times. The process is carried through in a closed cycle – all steel products become usable steel material again.

The use of scrap and steel remnants for steel manufacturing conserves natural resources and energy. The PL450 is up to 95% recyclable. The energy use of this parking system is only 49kWh per annum. This is comparable to a 10W LED luminary or the average use of a food blender in one year. And energy is derived from renewable sources. Moreover, the system is modular, allowing it to be dismantled and reassembled as needed.

# Glossary Megatrends

## Mobility

Since time immemorial, the *homo sapiens* has been *homo movens*. With the technological progress inaugurated by modernity, the radius of mobility for our species has expanded continuously. Today, it encompasses the planet as a whole – accompanied by a heightened awareness of the uniqueness and diversity of our Earth, but also of its fragility and vulnerability. Mobility creates connections, gives rise to commonalities, and brings people closer together – both literally and figuratively. Required today in order to ensure smooth transitions from the bike to public transport services, car sharing, long-distance transport, and private auto use are new interfaces between modes of mobility and the reorganization of the street space. The turn toward a socially acceptable and climate sustainable mobility is one of the key themes of our era. At the same time, the megatrend *mobility* is intimately interlinked with other megatrends.

## Individualization

*Individualization* represents a third way between isolation and collectivism. In place of private property, new sharing concepts – whether we are talking about building associations, cooperatives, or sharing via digital platforms or smart contracts – are acquiring ever greater importance in contemporary society. In the area of mobility in particular, a series of new options has emerged, encompassing bicycles and electric bikes, automobiles and delivery vehicles, electric scooters and other sharing options. Generally speaking, the renunciation of private ownership will be experienced not as a loss, but instead as a gain in freedom – it will mean a greater sense of responsibility in relation to our fellow human beings, while offering viable paths toward a sustainable lifestyle. In this context, individualization means a greater capacity for human action.

## Connectivity

Increasing interconnectedness, continuous access to information, video conferencing and remote working: All of these tools make possible a new form of temporally and geographically independent living. Higher *connectivity* allows us to overcome great distances in a fraction of a second: As a matter of course, people in different time and climate zones, in urban and rural areas, and on multiple continents can effortlessly arrange private or professional meetings. This also means that the categories center and periphery are progressively losing their meaning. In this sense, connectivity also means a spatial dehierarchization that benefits every-

one. Higher connectivity and big data also foster new forms of mobility such as autonomous driving, which then interlock to engender a new understanding of space.

## Urbanization

Cities are the socioeconomic and cultural centers of a society. Not despite but instead precisely because of increasing mobility and connectivity, they also represent major nodes for the negotiation of identification with society as a whole. Urbanity is everything – beyond purely functional aspects – that makes a city attractive and livable. Even megacities with many millions of residents thrive on the complexity of small-scale structures within which individuals are able to orient themselves. In opposition to the notion that cities are hostile to nature, high urban density is the path toward a sustainable lifestyle: Routes are shorter, the infrastructure is better developed, social existence is more diverse.

## Neo-Ecology

Sustainability is little more than a catchword until it has been translated into concrete ecological thinking and action. Then it becomes a pivotal instrument for overcoming our ongoing climate and biodiversity crises. The conservation of our planet's finite resources, the production of green energy from sun and wind, environmental protection, zero waste concepts, the renunciation of fossil fuels, and a continuous reduction of greenhouse gases, along with sustainable mobility, are leading toward a new understanding of the connection between the human individual and the planet Earth as an ecosystem. For all of us, sustainability begins with a mental leap, and becomes a concrete reality through our interactions with the environment.

## Globalization

No individual, no city, and no country can meet the challenges of our time in isolation. Precisely in light of the existing diversity of lifestyles and worldviews, collaboration is the best way forward for our planet. Increasingly, new borders lead to isolation and alienation. Needed instead is a comprehensive understanding of the global interconnectedness of ecosystems. Increasing interdependency represents an enhancement for all areas of life, and generates new synergies – whether economically, or in the realms of politics, culture, or communication. Only the peaceful interrelationship of all regions can lead toward adequate solutions for human coexistence, allowing the mobility of the future to become a reality.



Maximum flexibility on a minimum amount of space: the new COMBILIFT generation by WÖHR.



Photos: WÖHR Autoparksysteme GmbH

## Mobility – Not Automobile Dominance

Given continuing urbanization and networking based on digital infrastructures, driving and parking are in a state of change. In demand are solutions that densify parking space while managing urban mobility. The new generation of WÖHR COMBILIFT products integrates cross-system mobility solutions with a high degree of digitalization.

**W**orldwide, most people already live in urban agglomerations. Megacities and metropolises, along with large and medium-sized cities, are growing continuously. This means that in the future, the overwhelming share of global traffic will be concentrated on a tiny fraction of the Earth's surface.

In order to cope with traffic densification in urban regions, increasing importance is accorded to the interface between long distances and the final stretch, between home, work, and leisure activities, as well as between the movement of people and goods. Parking options are becoming individualized, digitalized, and networked, increasingly

remote from the one-dimensionality of a simple parking spaces. At the same time, the old boundaries between vehicle manufacturers, transport service providers, operators of parking facilities, and users are becoming increasingly blurred. The private vehicle is steadily being supplanted by flexible mobility concepts.

In light of these developments, WÖHR conceives its parking solutions to a greater extent as platform-spanning mobility hubs designed to allow individuals and freight services to save time, space, and energy while contributing to enhanced security and value maintenance.

### Greater Flexibility of Spatial Options with Reduced Space Requirements

The optimized COMBILIFT family illustrates how sustainable parking solutions might look in this future scenario. The first tangible result of this reorientation is the new generation of COMBILIFT products. These modular parking systems are capable of accommodating vehicles on up to three levels and in up to four rows, one behind the next. The new COMBILIFT generation is space-saving, flexible, and high performance. To achieve this, the developers at WÖHR have optimized decisive parameters of a product line that has already enjoyed success on the market for years.

The hydraulic cylinders used to raise vehicle platforms are integrated discreetly into the sides of the parking platforms. With the CL 543 MR and CL 542 MR versions, a new cross-grid mobile platform serves as a bridge for passing through parking rows. Not only does this appear uncluttered while conserving space; it also facilitates the combination

of up to four COMBILIFT modules in a row. Improved motors and synchronized movement sequences shorten waiting times during parking or vehicle retrieval – a decisive advantage in the future.

The sliding gates of the COMBILIFT have been newly integrated into the modules of the parking spaces. This reduces the depth of a module by up to ten centimeters, with no compromise in the number of available parking spaces, nor of safety. More flexibility in the design of the modules is made possible as well by the use of height-adjustable parking levels, as well as by an increased load capacity of up to three tons per platform. These innovations increase variability, making the COMBILIFT a flexible solution. The new COMBILIFT family consists of six models, which can be combined with one another in almost any way.

Connectivity has been factored in as well. The COMBILIFT module can be equipped with charging stations for electronic autos, while vehicle requests and potentially payments as well become possible through numerous on-board solutions for external interfaces. The possibilities extend from operations by a card or chip all the way to requests via smartphone.

A reconceptualization of urban mobility which now becomes flexible, individualized, networked, and sustainable – that is the aspiration of the new WÖHR parking solutions. For WÖHR, the future belongs to flexible and multifunctional mobility hubs. The new COMBILIFT parking solutions are available immediately, and are planned, assembled, and installed on-site according to individual requirements.

The “15-minute city” defines neighborhoods where daily errands can be accomplished within a radius of a 15-minute walk. According to Carlos Moreno, the term’s inventor, the concept addresses quality of life in cities both small and large, as well as the preservation of the natural environment.

Interview: Katja Reich and Marie Bruun Yde

### Carlos Moreno, how does the 15-minute system work in practice?

I conceptualized the 15-minute city based on my work on complex systems. The city is a complex man-made system that has adapted and evolved across centuries. Contemporary urban organization leads to long daily trips and exhausting lifestyles in polluted cities. The goal of the 15-minute city is to allow citizens to regain control of their time through an urban organization that promotes well-being while also participating in the preservation of the planet.

This urban planning model is human-centered. It proposes the redesign of the city so that residents can satisfy essential needs in a timeframe that does not exceed 15 minutes. It means a paradigm shift from a functionalist urban organization that is dependent on the use of cars to a mixed, compact urban organization that favors proximity. The 15-minute city has to be pleasant: it demands a high concentration of public services and amenities, implementation of active mobility offerings and the transformation of the built environment to foster social interaction.

### Is the 15-minute city about quality of life, or instead about ecological concerns?

It’s both! The advantage of an urban organization that targets proximity is that by reducing travel times and distances, it favors both: the living environment – by dedicating less street space to cars and minimizing heat islands. And the health of citizens – by creating space for sports activities and reducing air and noise pollution – which also contributes to the overall reduction of greenhouse gases and CO<sub>2</sub> emissions.

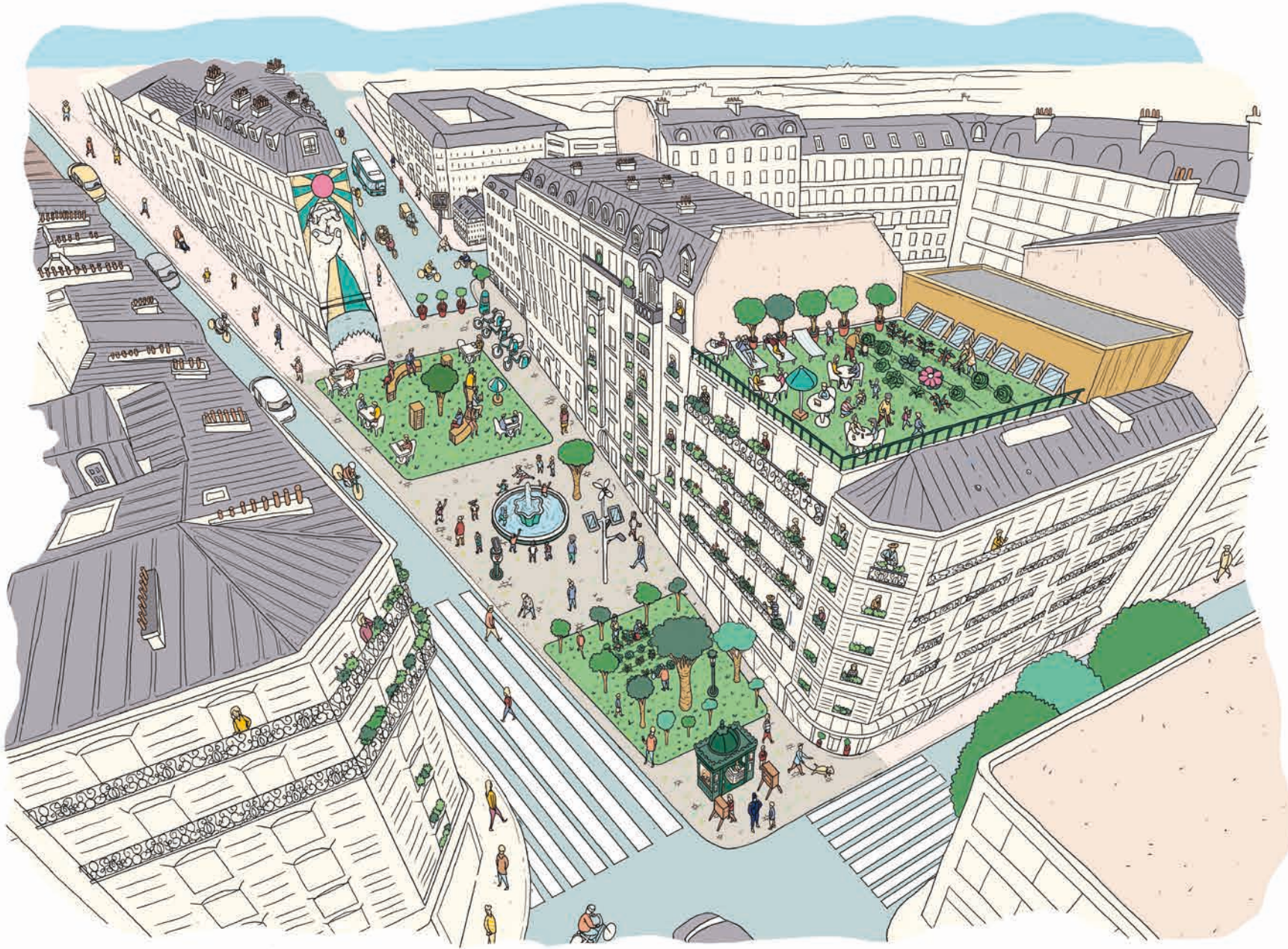
Nowadays, we can no longer dissociate quality of life from ecology. Sustainability has to be a common thread in all of the transformations we undertake, starting with urban areas, which are responsible for more than 60% of global greenhouse gases – most of it emitted by cars. The Intergovernmental Panel on Climate Change recognizes the 15-minute city as a serious alternative and recommends adapting it in order to limit climate change.

### Won't it place a limit to our comfort levels as well?

Increasing density is a subject of debate. It is perceived as an ecological necessity that could also be a source of reduced living comfort. In reality, it’s mainly a question of how to organize density so that it has a positive impact, not a neg-



# The 15-Minute City



Before and after: ideal streets in Paris with space for people instead of automobiles

Illustrations: Nicolas Bascop, Paris 2024

cities, where population density results in a sufficient demand for services, equipment, and infrastructure to justify the development of a local network. In large cities, the neighborhood scale is generally the most suitable when it comes to meeting the essential needs of inhabitants.

For looser, less dense territories, it may be necessary to extend the duration to 30 minutes, so that services and equipment can be shared between small towns. Extremely important in such instances is the coordination of travel between cities and their services. Accessible and frequent public transport or other flexible solutions must be provided so that each inhabitant can meet his or her essential needs without needing to drive a private automobile.

### Is the 15-minute concept being implemented in other cities as well?

Around the world, several cities are applying the concept of a city of proximity and short distances: Ottawa in Canada with "The New Official Plan," Melbourne in Australia with the "Melbourne Plan." Barcelona, too, has developed an urban strategy based on proximity: the model of the superblock. This concept has evolved to incorporate the key notion of the 15-minute city, a multi-service approach, with user-based urban planning. These urban blocks of 400 x 400 meters are altering the urban layout by creating new city centers, and hence a polycentric city. They are part of a new urban system on a human scale in place of one designed for cars. They manifest an innovative planning approach, which addresses challenges of mobility, public space, biodiversity, and social cohesion. And residents are encouraged to participate in the planning process.

### Is the 15-minute city approach relevant to the megacities of the Global South as well?

Today, mostly European and Western cities have picked up the idea because they possess many of the elements that are favorable to the implementation of proximity: highly-developed active mobility as seen in the Northern European countries, a culture of citizen participation as seen in Germany, highly developed public services as seen in France.

Informal settlements with minimal basic services, an absence of medium or long-term planning, political instability, and difficulties in accommodating the common good remain obstacles to the paradigm shift. Nevertheless, with the active role of international associations of mayors such as "C40 Cities," "United Cities and Local Governments," or organizations that are active in urban development, such as the UN HABITAT or UN Environment Programme, the 15-minute city concept is gaining influence internationally.

Today, large cities such as Buenos Aires or Bogotá are strongly committed to the approach of polycenters and vital districts. In North Africa, the city of Sousse in Tunisia chose an urban development plan based on the 15-minute city. No matter which continent, country or city, the implementation of an urban organization of proximity seems desirable, in my view.

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ative one. I propose to redefine the quality of density, and to use the 15-minute city concept to deploy a new urban intensity. This is made possible by the proximity and diversification of the urban organization.

Moreover, today's adaptations to climate change are essential to ensure quality of life and housing in the coming years. We must make changes, so that we'll be able to live at higher temperatures, with a larger population. We may also have to face the fact that our lifestyles are being called into question, because they're unsustainable! The most disturbing prospect we face is probably the reality of a hotter and drier world. But a minor sacrifice of comfort today can be transformed into a gain in comfort tomorrow.

**Twenty years ago, everyone was celebrating globalization and mobility. Today, facing the climate crisis and the COVID-19 pandemic, this attitude is changing. What will the future of mobility in and between cities look like?**

Mobility can no longer be what it was. Responsible mobility, in line with the objectives of sustainable development, will be reduced in terms of frequency, distance, and duration. Travel to distant places will be rarer, and daily trips shorter. We'll rediscover a more human and physical relationship with mobility, using the power of our own bodies: walking, running, cycling, or scootering. For long journeys between territories, rail transport or the use of shared cars will maximize use and minimize resource consumption. These trends are already at work! Since the COVID-19 crisis, the number of daily cyclists has exploded. In France, we're also witnessing the resumption of night trains for long trips through the country.

### How should car use be organized and streets configured in cities?

The proposal of the 15-minute city is to considerably reduce the urban footprint of the automobile. Today, roadways and parking spaces occupy 20% of the total surface area in cities. The intention is to reverse this trend, so that cars no longer

occupy so much urban space. The freed-up space can be devoted to pedestrians, active mobility, games, and vegetation. From a practical point of view, it involves redesigning streets with safe and spacious pedestrian and cycling facilities. Speeds can be reduced to promote

*"Nowadays, we can no longer dissociate quality of life from ecology."*

traffic calming. One-way streets can be established to regulate traffic. Reducing the footprint of parking spaces is also a lever to motivate changes in our daily habits. In short, cars are no longer welcome on the surface of the city center. In exchange, park-and-ride facilities and accessible public transport will have to be provided.

### Which car parking concept are you pursuing in Paris in order to displace stationary traffic from the surface while allowing urban space to be used for other purposes?

The city of Paris is a pioneer of the 15-minute city, and has implemented many transformations since 2020. Mayor Anne Hidalgo has reduced the number of parking spaces on the surface by 50%. Initiated as well during the COVID-19 crisis was the alternative use of parking spaces. Former street parking spaces are now used for restaurants, greenery, and bicycle parking. This policy generalizes the tradition of the "Parking Day": a worldwide event organized on the third weekend of September. It mobilizes citizens, artists, and activists to transform parking spaces temporarily into green, artistic, and friendly spaces.

### The concept of the 15-minute city focuses on inner-city neighborhoods. What about the periphery, the suburbs and the countryside?

The 15-minute time slot is adapted to big





For

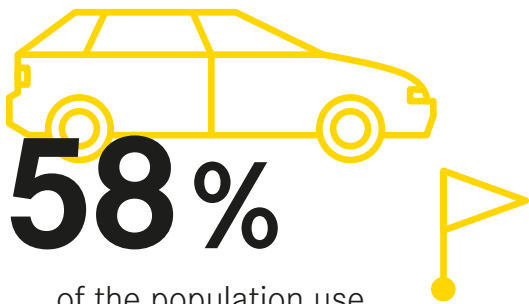
# 23 hours every day

the average automobile remains stationary and idle.



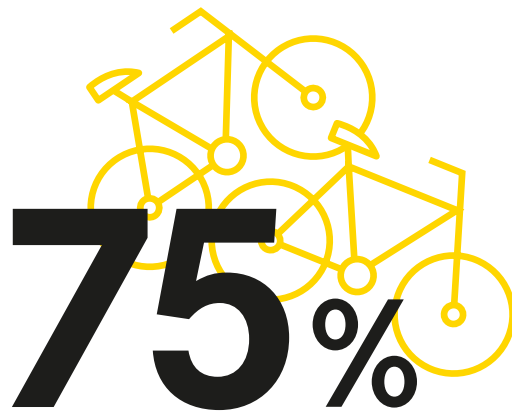
# 40–70 hours

annually the average driver spends searching for parking spaces in a major German city.



# 58%

of the population use an automobile to cover the entire trip to a job or educational/training facility.



# 75%

of cyclists would like to see more parking facilities in downtown areas.



# 23.9%

of all newly permitted private vehicles are SUVs (2017); in 2000, the number was only 2–9%.



is the penalty for dangerous, illegal parking on sidewalks or cycling routes in Germany, while in Switzerland it is €104, and in the Netherlands €140.



# 66%

of road users could envision using digital solutions for optimized parking.



Only **€0.08**

per day costs a residential parking permit in Munich, while a booth the size of a parking space at a weekly market costs €18 per day.



Photo: Philipp Bachhuber on Unsplash

## BAU

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BAU is the world's leading trade fair for architecture, materials, and systems, and is aimed at architects and engineers. The presentation is subdivided according to building materials, as well as by product and thematic areas. BAU is addressed to all those involved with planning, as well as with construction and all manner of building operations.

[www.bau-muenchen.de](http://www.bau-muenchen.de)



Photo: Claudio Schwarz on Unsplash

## Bauwelt Kongress

**May 11–12, 2023, Kosmos Berlin**

In the future, if we are to successfully manage the climate crisis, architectural offices and municipal administrations, the economic sector and the real estate industry will need to adopt more sustainable approaches to urban planning and architecture. The Bauwelt Congress 2023 is devoted to "The Gold of the City": the available materials, infrastructures, neighborhoods, and narratives which will need to be reutilized.

[www.kongress.bauwelt.de](http://www.kongress.bauwelt.de)

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