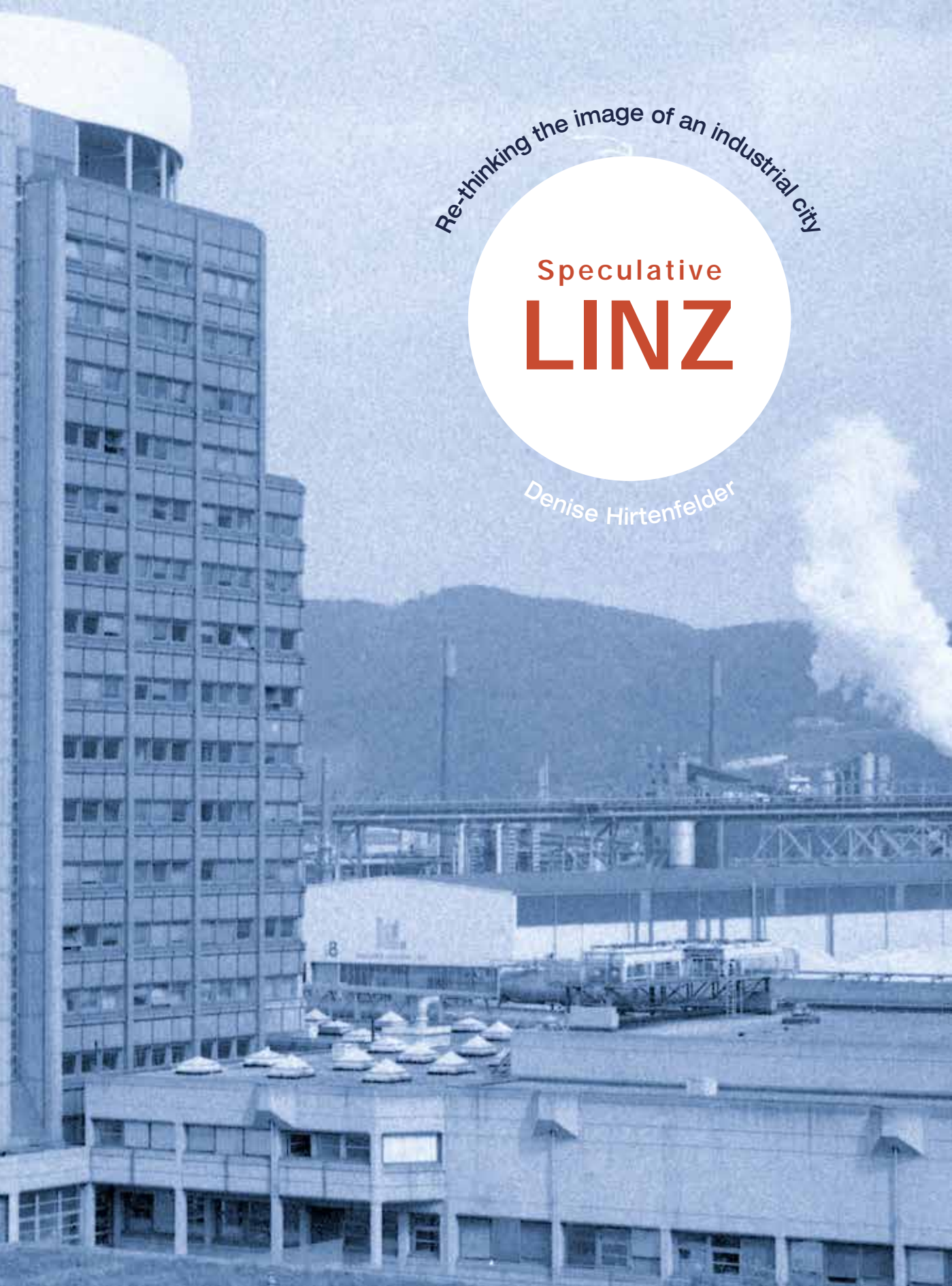


Re-thinking the image of an industrial city

Speculative  
**LINZ**

Denise Hirtenfelder





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**How can the image of an industrial city change into that of a social innovation city of the future? Speculative scenarios based on improvements of the Linz Innovation Program in 2018 and on interviews with residents ▪**

In the past, the term „industry“ had a negative connotation in the general image of city dwellers. It is often associated with prejudices such as forced labor, hard physical working conditions and pollution. But where industry lives, there are also opportunities and prosperity as well as a push for change and innovation. ▪

The industrial city visualizes what we probably portray as the beauty of the ugly. It often has little to give on the outside, yet it draws people to itself. Industrial cities often struggle with a bad reputation years after their crises, even though the cityscape has often changed over decades. This bad image in the national and international context can also be seen in the example of Linz, a

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medium-sized city in Upper Austria. It is considered the job engine of the province and the country of Austria and attracts above all young creative and technically interested people. They see opportunities for change in the city that would probably not be feasible in the capital Vienna, which is difficult to influence in terms of its historical and cultural values.▪

Linz is provincial. The city's attitude to life is characterized by its almost village-like flair, where everyone knows each other, scandals shock the population but also bring them closer together, and where anarchy is called for in some structures and has already been carried out in the past. Small revolutions have also given Linz the slogans „In Linz, it begins“ but also „Linz stinks“ .▪

The city developed its industrial harbor alongside the Danube as a result of Hitler's assignment to Herman Göring to build up an independent armament industry for the German Reich during World War II. In the 1980s it increasingly

struggled with a smog problem and workers' revolutions. Linz was described in various literary works as relatively modest. Numerous image campaigns were carried out and some failed. The German rapper Bushido described the city with the words „chemistry, drugs and boredom“.

Linz struggles every now and then with an image problem. However, the current mayor Klaus Luger wanted to counteract this with the Innovation Program that was developed in 2018. His goal is to make Linz the most innovative city in Austria. But what relevance does the city image actually have for its inhabitants nowadays? How is the image of a city influenced in our eyes? And how can the industrial city be developed into an innovation city in the first place?

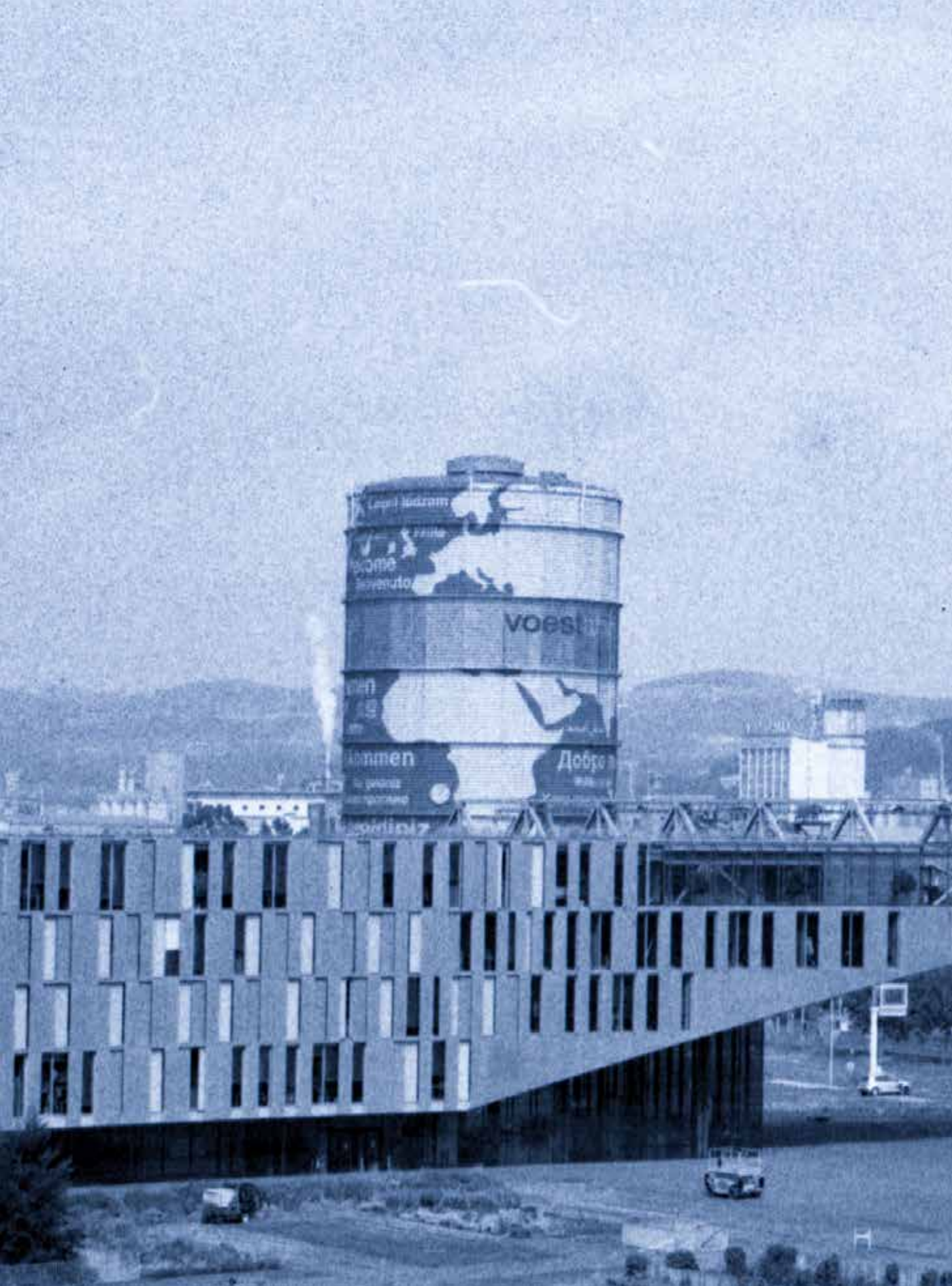
We have to rethink urban structures, include unpredictable events into city planning, combine art and culture with industry, and think radically yet realistically into the future. Klaus Luger's

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Innovation Program presents 4020 in 2040 in 35 measures. In order to not only flip the postcode, but to create an imaginable picture for residents in four future scenarios in the areas of Industry and Network, Education, Transport and Social Engagement, historical and economic considerations of the city were included in its future development. What events and people are changing the city? And how can we create an imagination through storytelling for previously untrained futurologists? This work tries to tell future stories of an industrial city realistically and sustainably and turn it into an innovation city where equality prevails at all levels. ▪

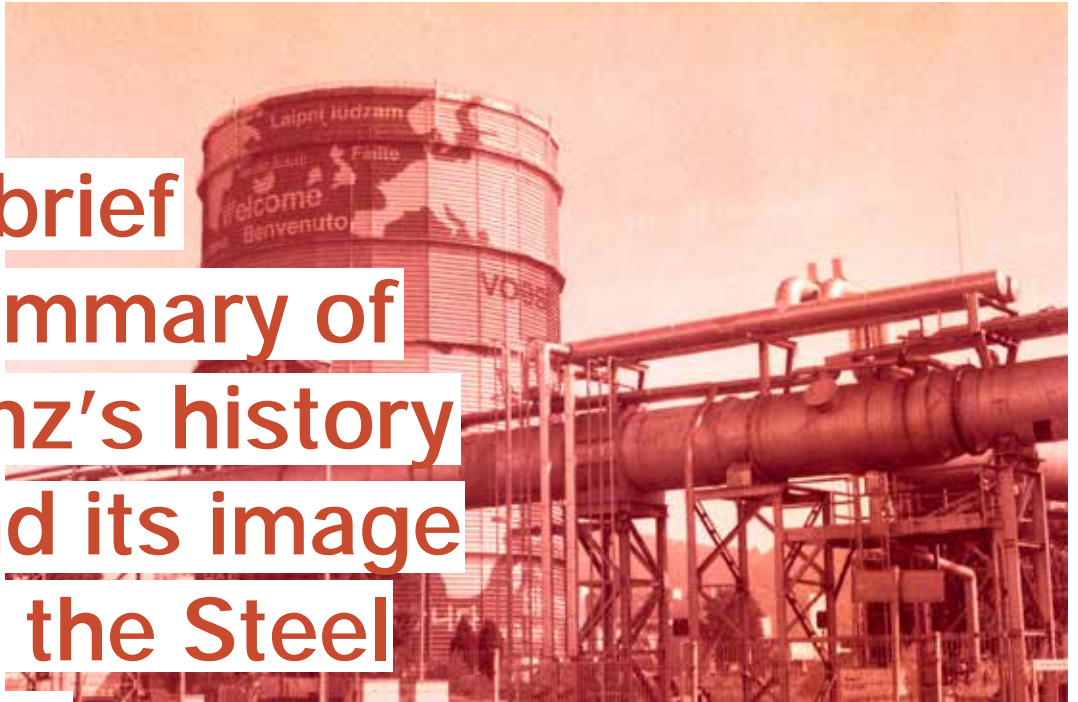








A brief  
summary of  
Linz's history  
and its image  
as the Steel  
City



## 1.1 The development of the industrial harbor in Linz

The starting point of Linz as an industrial city goes back to the 1930s when Hitler appointed Linz as one of the *Führerstädte* (leader cities) of the German Reich. In 1936, Hitler's deputy Hermann Göring was assigned to implement an ambitious Four-Year Plan. Within four years, the German Reich was to be made ready for war and independent in its armament industry. Austria had a great potential in raw material such as in large gold and foreign-currency reserves, natural resources, hydrogen power for producing electricity and a multitude of highly skilled people who were unemployed. Before that point the now industrial harbor of Linz was pure site of agriculture that was located beneficially next to the Danube.

Hitler and his troops marched into Austria on March 12, 1938. Upper Austria was the first stage in his triumphal procession to Vienna and quickly enlarged to become the Gau Upper Danube as a central role in the plans of the Nazis as a new center for armaments for the German Reich. The groundbreaking of the Hermann Göring Werke in Linz was held on May 13, 1938, with Hermann Göring himself taking part. The power plant, coking plant and sintering plant were quickly finalized. Some of them in a smaller scale

than originally planned due to war-related delays. The production of *Eisenwerke Oberdonau* (Iron Works of the Gau Upper Danube, or EWO) was launched in 1940.

In comparison to other industrial centers of the German Reich, a disproportionately high number of forced laborers were deployed in Linz during the Second World War. In 1944 the workforce of Hermann Göring Werke in Linz included 18,000 people of which 62% were forced laborers. The actual extent of them was probably much higher. In some parts of the plan was the proportion of forced labor almost at 90%. Without forced labor, the Linz site of Hermann Göring Werke could not have been built or operated because labor shortage was too high. Forced laborers were paid less than domestic workers. Prisoners of war and concentration camp prisoners received no payment at all.

Between July 1944 and April 1945, Linz became the target of 22 air raids by the British and American army. Most of the attacks were situated at the Hermann Göring Werke. At the beginning of May 1945, the US Army troops marched into Upper Austria. Orders to destroy the Nibelungen Bridge and other key war facilities were not carried out but not many

days later, Nazi Germany liberated from National Socialism.

The bombings at the Herman Göring Werke caused considerable damage. Nevertheless, important sections of facility remained almost intact. At the Potsdam Conference from July 17<sup>th</sup> to August 2<sup>nd</sup>, 1945, the Allies came to an agreement to rename Herman Göring Werke to "United Austrian Iron and Steel works" – short VOEST-Alpine AG – and start to rebuild them in four years based on the Marshall Plan. In order to benefit from the Marshall Plan, the Austrian "Iron and Steel Plan" was designed to make Linz to the site for the production of commercial sheet steel. The most important step in the VOEST's expansion was the development of the LD process – Linz Donauwitzer process – that still dominates the world's steel production with more than two thirds today (Museum of Contemporary History Linz, n.d.).

## 1.2 Linz stinks

In the years that followed, after the success and expansion of Voestalpine into one of the most successful steel industries in the world, new problems arose that affected Linz's image nationally and internationally. On the one hand, Linz developed into a prosperous social democratic workers' city, where workers received acceptable wages and care from the businesses located next to the industrial port of the Danube. Especially in the 1950s, the extent of Voest's social benefits for employees was enormous. In the post-war period and the reconstruction, sports clubs such as the internationally rising football club SK VOEST - founded in 1946 - developed. But also holidays in the company's own ski hut and the supply of free coal reserves for employees were offered. Until the 1980s, the social benefits were even increased with cheaper food supplies for the employees, the sale of clothing and an own history club to deal with the dark side of Voestalpine about the use of forced labor during World War II (John, 2009). On the other hand, the companies at the industrial harbor in Linz also came under increasing national criticism.

Since the beginning of the 1980s, problems with the main air pollutants sulphur dioxide, nitrogen dioxide and dust have escalated in Linz. The smog hanging over the city became a defining issue in public and media discussions. One of the best-known newspaper headlines was in the *Neue Kronenzeitung* on January 24<sup>th</sup>, 1985, with „Smog Alarm puts Linz's Population in Horror!“ Only a short time later, the city of Linz found itself between protests by thousands of students, as well as within the emergence of ecological movements.

During this time also the slogan “Linz stinks” came up. Hugo Schanovsky, who had been the city's mayor since 1984, tried to counteract this in 1985 with the famous slogan „Linz must become the cleanest industrial city in Austria!“ However, his ecological campaign demands came under threat in the late autumn of 1985 with the onset of the economic crisis at Voestalpine (Philipp, 2009).

The crash of Voestalpine AG began in November 1985. This was triggered by the discovery of bad speculations by Intertrading GmbH, a group-owned trading company founded in 1978. Its turnover under the management of Gernot Preschern ended in disaster due to risky oil speculations. Voestalpine announced an expected loss of approximately 300 million euros. Another point of loss was the involvement of General Director Heribert Apfalter in the uncovered Noricum affair - illegal arms deliveries to Iraq and Iran (Philipp, 2009).

Even though the air pollution problem could be contained, and Linz indeed became a very clean industrial city, the economic struggles of Voestalpine persisted. It came to a full privatization of the company between 1985 and 2005, which had previously been a public industry of the country of Austria. There were multiple protests by the unsatisfied employees. On 4 September 2003, more than 12,000 people formed a kilometer-long human chain across the city (Philipp, 2009).



### 1.3 Linz a cultural city with an image problem

So far, Linz has only been presented as a boring industrial city with a provincial character. Too often it has been referred to by authors in a negative sense. The Austrian writer Eduard von Bauernfeld rhymed in his *Poetic Diary* 1845: „There’s no hurry with cyanide! One can also die quietly - of boredom. Like in the province. In Linz, for example.“ (Bauernfeld 1871). Thomas Bernhard’s play *Heldenplatz* contains the passage: „Born in Linz, that alone is a terrible thought“. (Bernhard, 1995).

Alongside the problems and the bad reputation of heavy industry, other cultural currents developed in Linz, which led to the city being named European Capital of Culture in 2009 and UNESCO City of Media Arts in 2016. Alternative scenes developed from the late 1970s onwards

in venues such as Café Landgraf and Elektro Schmid and later in the still existing cultural associations Stadtwerkstatt and KAPU. One can image Linz also as city of cultural revolt in the past. The band Willi Warta summed up the attitude to life of that time with their song *Stahlstadtkinder* (Steel City Kids). The uniqueness of happenings for the steel city kids continued when in September 1984 the Posthof as an own rock house for Linz opened. But not only that: In November 1989 Linz was unexpectedly awaiting special guests in the cultural initiative KAPU. The band Nirvana with the singer Curt Cobain was having a gig before their international breakthrough two years later (Thanner. Zogholy, 2009).



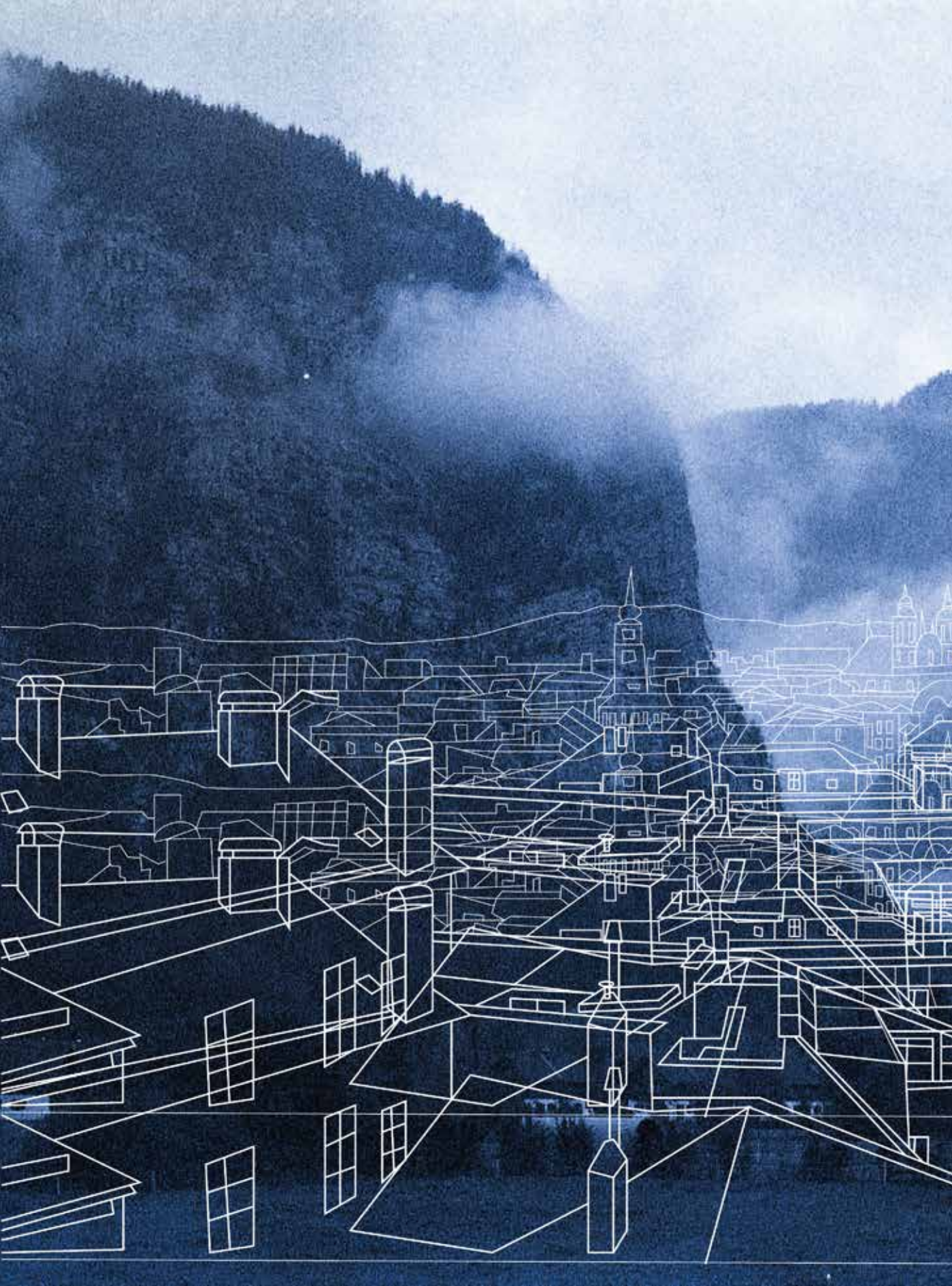


In 1979, Linz experienced another breakthrough, which the city would later crown as the European Capital of Culture in 2009 and as the UNESCO City of Media Arts in 2016. A crowd of around 100,000 people gathered alongside the Danube on September 18<sup>th</sup>, 1979, where the city's first *Klangwolke* (Cloud of Sound) was held. Under the initiative of regional director of the Austrian broadcasting corporation ORF Hannes Leopoldseder, the *Klangwolke*, among other things, developed into the Ars Electronica Festival. Over the years, the Ars Electronica Festival has developed into several sub-areas, including the Ars Electronica Museum of the Future and an in-house research lab, the Ars Electronica Futurelab (Hirsch, 2019). The Prix Ars Electronica advanced today in one of the most famous international awards in the media art scene.

Nevertheless, Linz also had to contend with scandals in the cultural sphere. A notorious story spread in 2005 when the German rapper Bushido wanted to produce his album *Staatsfein Nr. 1* ("Public Enemy No. 1") with the two Linz hip-hop rappers and producers DJ Stickle and Chakuza. After smashing Bushido's BMW during a long night in KAPU, he suspected a young man from Linz, whom Bushido gave a craniocerebral trauma in a brawl. The rapper had to spend a couple of days in pre-trial detention in Linz and go through a court process. More excitement than the trial itself, however, was caused by an accompanying story published in the renowned German magazine „Der Spiegel“ by the journalist Wolfgang Höbel. He writes in his article *Hard as Nutella*: „Bushido

describes the events of that July night from his point of view: work in the recording studio, then from the luxury hotel to the club. Actually, you should not go to the club in Linz. Actually, you should not go to Linz at all. Linz is the arse end of the world: chemistry, boredom, drugs. Which, of course, means you have to go to Linz if you're in the rap business, in other words: to the ghetto city of Austria, the hardest thing Austria has to offer“ (Höbel, 2005). Linz was bullied in numerous Austrian and German media formats. Later it turned out that the story was fictitious, but artists in Linz still took up the topic. The Linz artists' collective qujOchÖ produced a short clip in which the city's father Dobuschido - former mayor Franz Dobusch - expels the scandalous rapper Bushido from Linz. (Philipp, 2009).

Overcoming the image of the dirty industrial city and presenting itself as a culturally open and international meeting zone already found attraction in the 1980s. Several image-building initiatives have taken place over the decades. Not least the release of the provocative „Linz is Linz“ campaign video by the Linz Tourist Office in collaboration with the company Forafilm in 2021 (Linztourism, 2021). The campaign earned national acclaim through various social media channels, but also harsh criticism. Especially the current mayor of Linz, Klaus Luger, who published the Linz Innovation Program together with stakeholders in 2018, criticized the campaign as not having been discussed with him beforehand and as a failure (ooe.orf.at, 2021).





# The Relevance of an Image



## 2.1 The Image of the City

As an “image” we understand in the primary sense a mental conception that people have in their mind about something particular and imagination how this particular picture might be like. It is also about the representation about a certain object, person, space, or theme to the outside world (Merriam Webster, n.d.). An image is composed on personal perception, generalization, and a set of image elements. Also, how we recognize and adopt the city we live in is shaped by our perception. It differs from person to person.

In 1960, Kevin Lynch, an urban planner and writer from the US, expresses in his theory *The Image of the City* the legibility of cities. He explores the imageability of cities and the “good city form” through its legibility. The “good city form” communicates the importance of biological, psychological, social, and cultural needs of citizens.

We can measure imageability through identity – the recognition of urban environments as different from other, structure – each element is relative to other elements and the observer and therefore part of a greater system, and meaning – the layer of understanding applied by the observer. These three components

vary in its objectivity (identity) to complete a subjective meaning. Therefore, each person considers a different image of the city based on how to relate to the environment and especially to the meanings we attribute through experiences (Sughito, 2016).

When mapping out a city in our minds, we have the possibility to reflect on Lynch’s five elements that shape the city. The first element and greatest element is the Region. Regions include all city characteristics and other structural elements. Regions differ and become clear from the other parts of the city and settlements within their characteristics. Those can be recognized and distinguished easily by extent, patterns, materials, buildings, and elements. The second component are Borders. Borders show visual effects between areas and separate regions in a sharp way through natural or artificial boarders. While Paths, such as streets, transit ways, pedestrian roads and railways act as linear city guides that connect buildings and other structures for people how they move and interact in the city. Also, Vital Points as symbols of regions are relevant. They play the role of the dense activity centers of a city and use specific physical characteristics. Finally, is the city shaped by Landmarks, physical

elements which attract attention with their characteristics such as their scale, pattern, form, and material. They can be seen from multiple regions of the city (Zeybekoğlu, Çakır, Benian, 2009).

Everyone of us can test the legibility of our environments in the city we live in by asking ourselves some questions. How can I direct someone to get to the local shops? What mental map do I form in my head? What paths do I travel along? What landmarks do I see? And what environment do I arrive at (Sughito, 2016)? Additionally, we can also ask ourselves what feelings we are conscious of when we walk through these places? What do we already know about this city? What is the mood of the city? What do we emotionally connect to it?

## 2.2 Mapping out the Image of the City of Linz

In eight interviews participants who have a close connection – means: living or obtaining regular residency – to Linz, were asked to map out their individual image of the city in the present and in the future. The first part of the survey was dealing with the legibility of the individual image participants have of Linz today. The goal was that they answer the questions intuitively and with what comes to their mind first. It includes the mapping of the usual places they visit in Linz, as well as their own emotions towards the attitude to life in Linz.

In the first question, participants were asked to describe Linz intuitively in three words. Since three quarters of the participants have a connection to the art and culture scene in Linz, it emerged strongly that the city was described as artistic and creative. They characterize the city as lively, cultural and with potential. But also as traditional and industrial, which can be assumed from the still-established values of many residents and the lack of willingness to take risks.

In the second question, participants were asked to name three important factors of knowledge about Linz without researching. This means historic facts, associated events, social challenges in the present and past, etc. Some of them are aware of the city's dark history of building the industrial port under the leadership of Herman Göring for the German Reich during World War II. They are also aware of the city's reputation as Hitler's favorite city where he grew up. The participants partly still connect the city to its history of the steel industry as well as the heavy industry in general. But they are

also aware of the impact of Ars Electronica on Linz as a city branding and of the long tradition of cultural and social places for art enthusiasts, such as the development of the Stadtwerkstatt and KAPU. Not only Ars Electronica and other initiatives contributed to the title of European Capital of Culture 2009 but also events such as the Bruckner Festival and the Pflasterspektakel. Furthermore, Linz was home to many historical scientists, such as Johannes Kepler, after whom the university was named.

Next, participants were asked to describe the regions in which they would personally separate Linz. They mainly distinguish between the part above the Danube - Urfahr - and the part below the Danube - the historic city center. Some of them also named the area around the railway station and the industrial harbor. The outer parts of the city, such as Pichling and Ebelsberg, were mentioned rather less.

Following this question, the participants were asked to answer which paths they mostly follow and which vital points they can connect to them. Most of them follow paths in the city center such as the shopping street Landstraße that crosses the Taubenmarkt, Graben, Herrenstraße and Hauptplatz. The often walk over the Nibelungenbrücke which leads towards Urfahr. They describe the OK Platz and the Ars Electronica Center with surrounding bars and restaurants as vital points along the way.

The fifth question was focusing on the general emotions the participants have



Individual City Map  
by Interviewees

R1 Urfahr  
R2 City Center  
R3 Industrial Area  
R4 Train Station

P1 Landstraße  
P2 Herrenstraße  
V1 Ars Electronica Center  
V2 OK Platz





towards Linz and how they feel when they walk through the city. Most of them walk through Linz with open eyes and curiosity. Although the city is rather medium-sized, there is always something to discover. Everything seems relaxed and familiar. But the participants' feeling also depends mainly on the area. While they feel rather safe and happy in the city center, the area around the industrial harbor, which takes up a large space of Linz, is rather dark and ugly. But even this is a wonder to discover in some eyes.

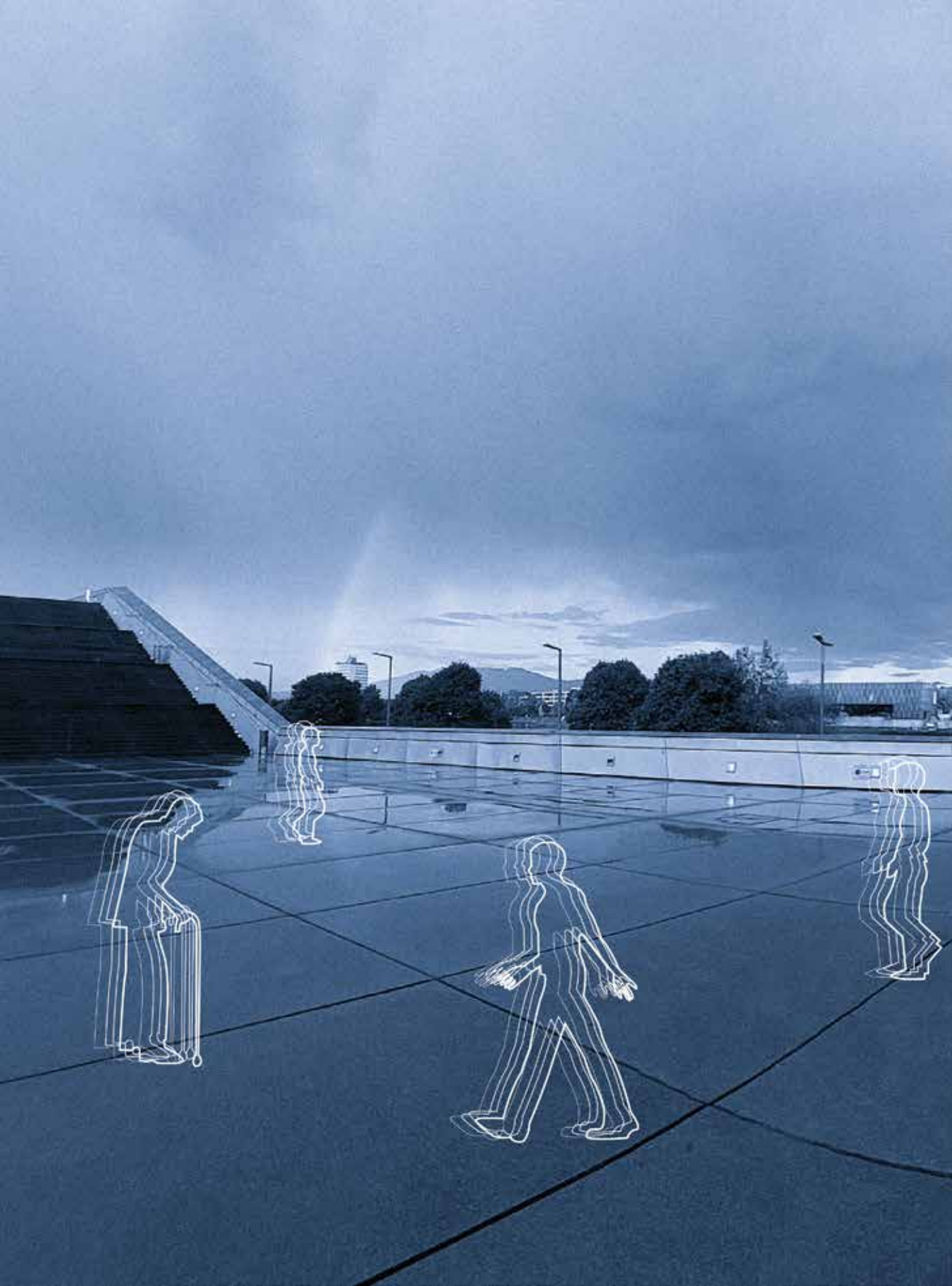
Afterwards, the participants were asked to describe what makes Linz unique. Some funny answers emerged, such as the high amount of bosna snack bars for purchasing the nightly snack after partying. Apparently, there are also a large number of fabric shops where the participants receive extensive and friendly advice. The green areas in and around the city are also highly valued. It seems that Linz is appreciated for the fact that one can quickly escape the daily work routine into nature. Of course, Ars Electronica was also mentioned here as a unique example of the Austrian Media Art scene.

Interesting was also to see how much the participants were influenced by the image of Linz represented in Media or by outside forces, and how they would describe the attitude to life in Linz. It is remarkable that exactly half of them feel influenced by the media and the opinion of others about the cityscape. They themselves describe the attitude to life in Linz as lively but not

bustling, as well as innovation-driven and just as relaxed as the inhabitants, who are narrated as relatively straightforward.

Last, it was exciting to know what they would include into an image campaign about the city. Although the last „Linz is Linz“ campaign caused quite a stir, some of the participants think it gets to the heart of the city's image. A few would bring in many more places that have a rather worse reputation, such as the industrial places, the labor that is executed there, as well as the area around the Danube. A particularly interesting idea was a 15-minute city tour.

In summary, the residents in the interviews are satisfied with their life in Linz. They are aware that the city is still partly traditional in some factors but that especially innovation in the cultural sector is purposeful. The industrial part of the city and the history around the construction of the harbor partly influence the interviewed participants in their image of the city but they value particularly the green areas of the city. What seems to stand out is that they see the city more as a general picture and they do not focus so much on specific parts that make Linz remarkable and unique from their individual viewpoint. Many of them are only superficially aware of the economic activity and the prosperity of the inhabitants through the industry sector. The Start-Up scene was also not mentioned at all (Hirtenfelder, 2021). The current mayor of Linz wants to counteract this with the city's Innovation Program, which is described in the next chapter.





# From the industrial city to the innovation city

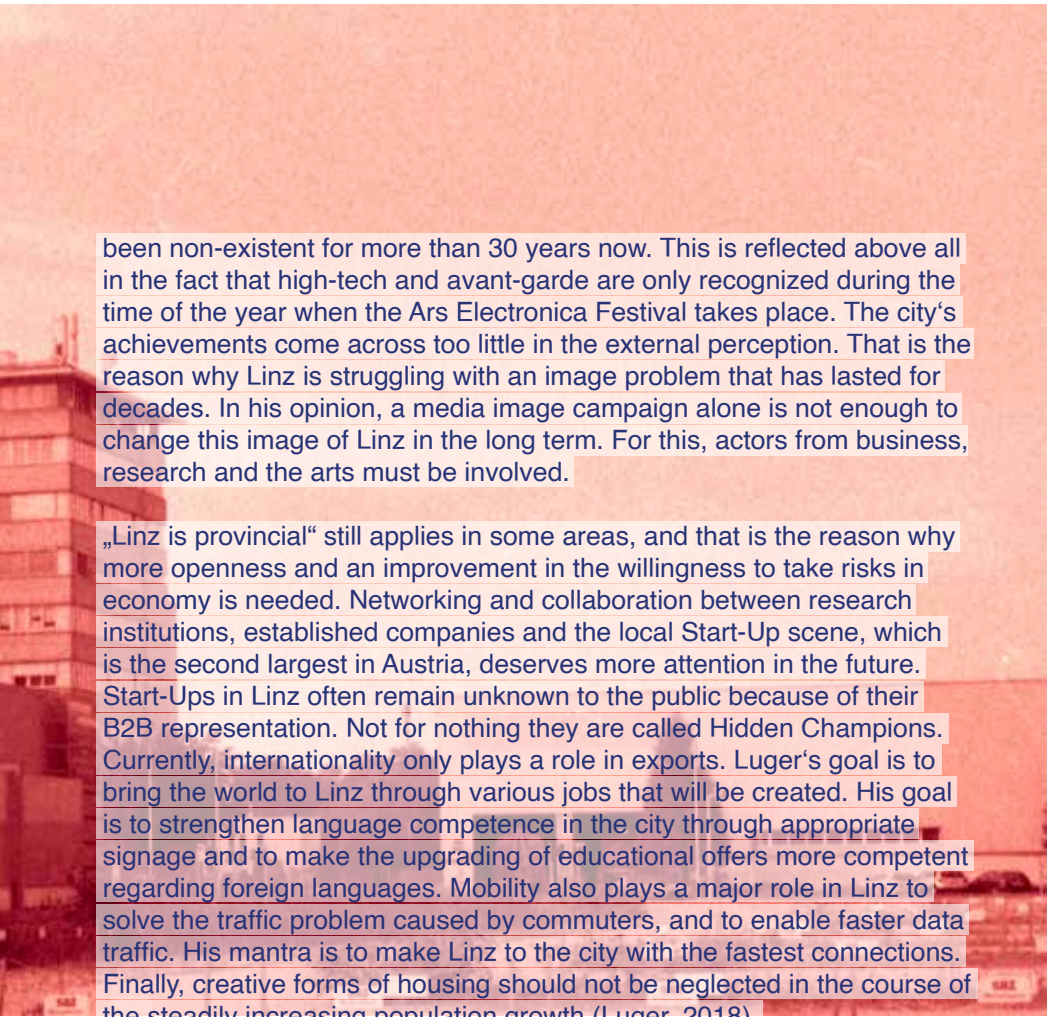
## Chapter 3



### 3.1 The Innovation Program

The editing and publishing of the Linz Innovation Program was commissioned by mayor Klaus Luger (socio-democratic party) in the years before and during 2018. Together, in interdisciplinary cooperation with different departments, business units, stakeholders, and experts he has the goal to make Linz to the most innovative city in Austria. Linz is known as the job engine of the province of Upper Austria and shows itself as the industrial heart of Austria. This enables the residents to enjoy a high standard of living. In order to keep up with the speed of digitalization in the economy and society in terms of national and international competition, changes are needed that will make Linz fit for the future.

According to Luger, an innovative economy is composed of innovative technologies, innovative labor, innovative education, and an innovative environment. He is still concerned about the legacy and bad reputation of the city's heavy industry that has



been non-existent for more than 30 years now. This is reflected above all in the fact that high-tech and avant-garde are only recognized during the time of the year when the Ars Electronica Festival takes place. The city's achievements come across too little in the external perception. That is the reason why Linz is struggling with an image problem that has lasted for decades. In his opinion, a media image campaign alone is not enough to change this image of Linz in the long term. For this, actors from business, research and the arts must be involved.

„Linz is provincial“ still applies in some areas, and that is the reason why more openness and an improvement in the willingness to take risks in economy is needed. Networking and collaboration between research institutions, established companies and the local Start-Up scene, which is the second largest in Austria, deserves more attention in the future. Start-Ups in Linz often remain unknown to the public because of their B2B representation. Not for nothing they are called Hidden Champions. Currently, internationality only plays a role in exports. Luger's goal is to bring the world to Linz through various jobs that will be created. His goal is to strengthen language competence in the city through appropriate signage and to make the upgrading of educational offers more competent regarding foreign languages. Mobility also plays a major role in Linz to solve the traffic problem caused by commuters, and to enable faster data traffic. His mantra is to make Linz to the city with the fastest connections. Finally, creative forms of housing should not be neglected in the course of the steadily increasing population growth (Luger, 2018).

Two studies were conducted to implement the Innovation Program. The first was based on Statistics Austria data comparing Linz-Wels with Vienna and Graz as NUTS-3 regions. Since statistical data alone is not sufficient, deeper insights into the emergence and conditions of regional innovation leaders were needed. In 2016 and 2017, 50 interviews were conducted with founders and heads of R&D departments, with (technical) managing directors and additionally with medium-sized and large companies, as well as Start-Ups. The interview partners were mostly working in the technical manufacturing sector. The focus of the study was mainly lying on economic and technological innovation. Social and cultural innovation were just a part of it. The in-depth interviews were divided into six sub-areas: Business, Infrastructure, Politics, Habitat, People and Skills, as well as Culture and Image. Based on positive and improvable results, 35 measures were developed to make Linz to an innovation city by 2040 (Auinger, Bauer, 2018).

### 3.2 Remarks on the Innovation Program

Within the framework of the Linz Innovation Program, which was published in 2018, some concerns can be found today. Firstly, the Innovation Program was written before the outbreak of the global Covid-19 pandemic. On the one hand, the outbreak of unpredictable social events cannot be planned in advance, and on the other hand, it brings further economic concerns with it. The rethinking of the Innovation Program in this paper is consciously moved from the target year 2040 to 2050, as unpredictable events often contribute to radical social change.

The Covid-19 pandemic once again triggered an economic crisis, and rapidly changed our attitude to work. Workers have made it the norm to work from home. The commuting problem, which was prevalent in Linz still applies today but the majority of the population feels the need for a more flexible working week, which can be done partly at the place of work and partly from home. Accordingly, the restructuring and relevance of the digital working day now plays an even greater role. In addition, the city of Linz wants to present itself as a culturally open city. However, after the outbreak of the Covid-19 pandemic, there were radical cuts in the budget of art institutions by the municipality. The question now is how to build in the future on radical budget cuts in the arts and culture sector due to unexpected social events and what the development of flexible working hours means for the manufacturing industry in the future.

Another Labor Movement in the near future is also foreseeable in the city of Linz. In the history of the steel city, people have been offered a high standard of living through jobs in the manufacturing sector. Increasingly, however, the population is switching manufacturing jobs to services. These are often not as well paid as the first one. Therefore, it is important to find a well-rewarded balance between the both of them. The consideration of an unconditional basic income would therefore be necessary in both functions. De-industrialization also means triggering chain reactions. The example of Pittsburgh and Detroit shows that the moment Pittsburgh lost jobs in the steel industry, Detroit lost jobs in car manufacturing. New, more sustainable methods of industry must create jobs early enough for future generations in cities that benefit from each other (IEEE Spectrum, 2021).

With the expansion of privatization and capitalism in the past, one can also expect inflation in labor and housing costs in the future. Even a politically social democratic oriented city needs to rethink how to avoid rising rents and ensure social equality

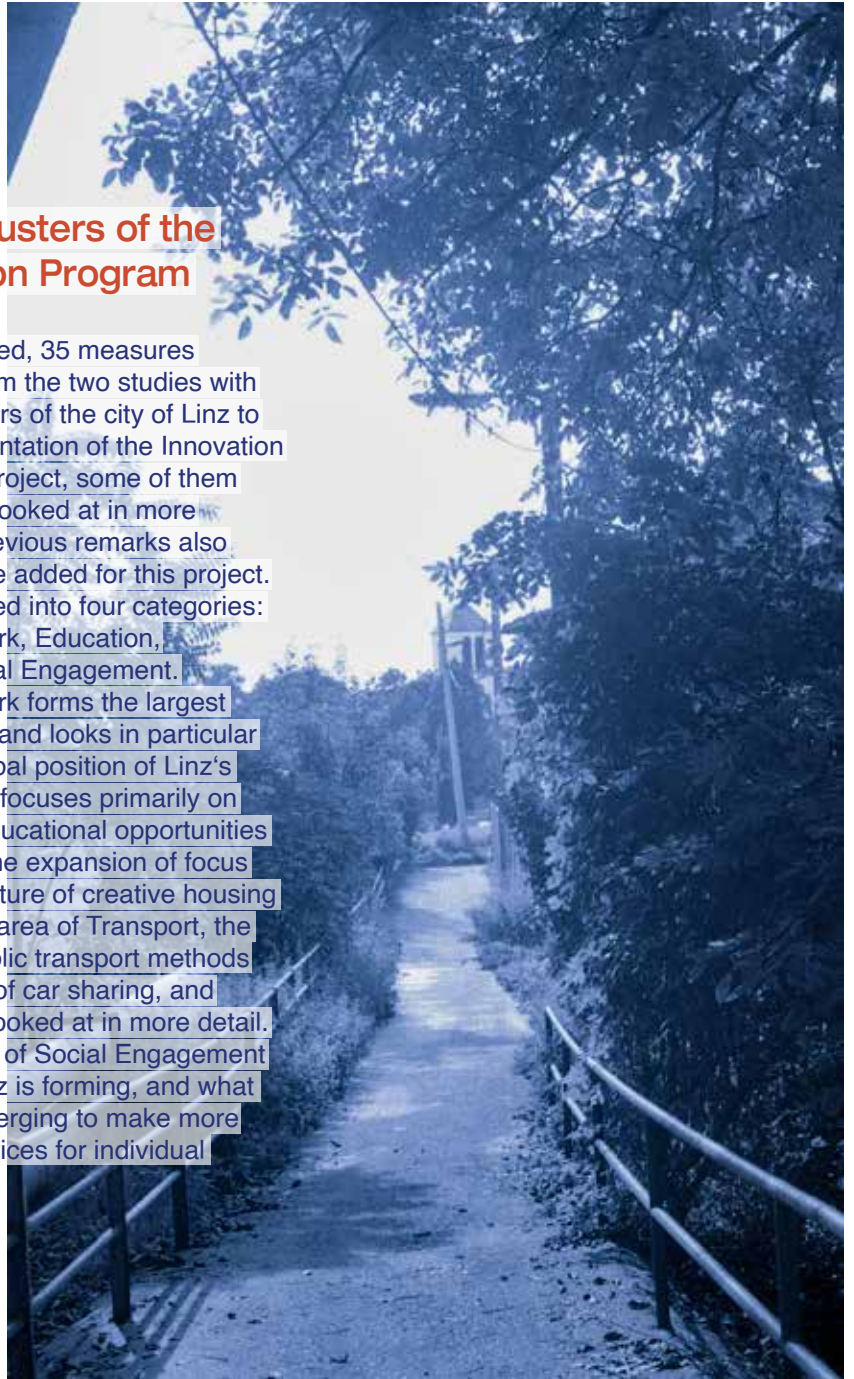


and opportunities for advancement. When people talk about internationalization, they often only speak of the desired population growth from economically strong countries. Equality in the flow of migration from „non-Western“ countries and the support in expansion of their skills is often left out of the picture. Linz is in the heart of Austria, and Austria is in the heart of Europe. The city is surrounded by the Alps, nearby lakes and is located in a favorable climate zone despite increasing thunderstorm disasters. Until 2040 and 2050 respectively, one can therefore also assume a stronger population growth due to climate change. The question arises how fit Linz will be in future with handling migration flows regarding climate change.

Furthermore, the audience of the Innovation Program mostly refers to the technical environment in Linz, whereas art and culture are also in the focus but stakeholders in these areas are neglected. In the European Capital of Culture 2009 and the UNESCO City of Media Arts 2016, a young, creative audience is among others the focus of innovation. As we can already see in the history of Linz, the attitude to life has often been one of young creative rebellion, and the alternative scene plays an important role in this. Now, of course, the question also arises if the Innovation Program can be implemented primarily by an economically driven uprising elite alone, or whether change can be implemented primarily by artistic critics of the system. Goal of this work is to rethink the Innovation Program economically as well as socially equitable for next generations.

### 3.3 The 4 Clusters of the Innovation Program

As already mentioned, 35 measures were developed from the two studies with different stakeholders of the city of Linz to realize the implementation of the Innovation Program. For this project, some of them were selected and looked at in more detail. Based on previous remarks also new measures were added for this project. These can be divided into four categories: Industry and Network, Education, Transport and Social Engagement. Industry and Network forms the largest group of measures and looks in particular at the local and global position of Linz's industry. Education focuses primarily on the expansion of educational opportunities in the city of Linz, the expansion of focus locations and the future of creative housing for students. In the area of Transport, the development of public transport methods and the expansion of car sharing, and e-transport will be looked at in more detail. Lastly, a new group of Social Engagement of the people of Linz is forming, and what possibilities are emerging to make more room for social services for individual citizens.





### 3.3.1 Industry & Network

The Start-Up scene in Linz is the second largest in Austria. Many young, creative minds find the Tabakfabrik as a location to realize their ideas. Nevertheless, the city's Start-Up scene still has limited local appeal. Many established companies are too little aware that regional cooperation and risk-taking for new innovations can be sufficiently implemented in Linz. One of the goals of the Innovation Program is to create advisory services between established companies and Start-Ups. These range from mentoring programs and cooperation platforms to company participations. Not only large companies, but also innovative Start-Ups are equally eager to establish new networks and cooperation agreements.

The Tabakfabrik is a popular place for young companies to rent flexible office spaces. Nevertheless, due to its success, the Tabakfabrik is reaching its spatial limits. Therefore, a further spatial development that is easily accessible from all sides of the city is inevitable. The city's vision is to create an exchange and co-working space in the immediate vicinity of the main railway station as a focal point. In addition, a fast connection between the Tabakfabrik and the main station would be an important addition to public transport.

Furthermore, the city of Linz is playing with the idea of introducing a basic income for founders in the starting phase of business Start-Ups. Women in particular

are increasingly looking for the path to self-employment, but the lack of social and family safety nets has so far made this impossible. A basic income offers security and therefore contributes to reducing fears about the future. This measure is particularly interesting if one extends the idea of a basic income for founders to the entire population of Linz. The topic of an unconditional basic income is widely disputed. The following future scenario shows why such a basic income would be valuable to implement.

There is already a shortage of skilled workers in Linz. Necessary positions cannot be filled in many cases. The competition for talents leads all companies into a common bottleneck in a limited market. Leading companies, small and medium-sized enterprises and Start-Ups must work together across the board to strengthen the attractiveness factors of their companies. Their cooperation would make the metropolitan area in Linz highly attractive as a labor market and attracts young high potentials.

Last, there is still a shortage of female and diverse leadership positions in the Linz area. Many industries, especially technical ones, are still male dominated. It would be interesting to think of a future where gender equality exists at all economic levels. This measure is also considered individually attached to this project.

### 3.3.2 Education

Linz is currently experiencing a shortage of specialized industrial services. However, these are an essential prerequisite in the ongoing digitalization of the economy. University education programs should help to enrich the corresponding offer and strengthen Linz-Wels as a business location. This would mean that Start-Ups and established companies would no longer have to refer to offers outside the region, and the expansion of innovative university departments would contribute to a further increase in the attractiveness of Linz as a study location.

A student city also needs affordable housing options due to changing working requirements in urban lifestyles. For this, creative forms of living and working in an urban development are more in demand than ever. However, in up-and-

coming cities, the main problem is a limited supply of space. The revitalization of former industrial sites such as old harbor or industrial estates can offer an affordable answer. Houseboats, containers, tiny houses, shared apartments, or the combination of living and working space are also captivating options of social housing in the future.

Furthermore, there is a higher demand for open learning offers in universities. As an added measure, an extension of more public learning spaces in universities would be a possibility. This would allow students to collaborate with people from other fields of study in a transdisciplinary way and find an exchange of skills already during their studies. To achieve this, learning spaces must be designed more freely and with fewer doors and walls.



### 3.3.3 Transport

At the moment, transport from A to B is carried out by different modes of transfer. Nevertheless, Linz is struggling with an increased congestion problem on the surrounding motorways and in the city center. The aim of the Innovation Program is to develop connections across city and municipal boundaries, and to give congested roads, parking problems and poor air quality no more chance. In fact, public transport is to be developed so well that the broad majority of the population in Linz and the surrounding area will do without their cars, and high-quality public transport will become the primary means of transport in the long term. In addition to the expansion of public transport, Linz also wants to support the development of modern means of travelling. The individual choice from bicycle to public transport to car sharing, is made on the basis of the current traffic situation, supported by a smart phone app. In addition, the city plans to expand e-bike rental stations and the charging infrastructure for electrically powered vehicles over the next 20 years (Auinger, Auinger, Bauer, Langeder, Oberneder, 2018).

Harald Welzer argues in his book *Alles könnte anders sein* ("Everything could be different") for a car-free city. He claims that in a city in which there were no cars nor car roads nor traffic lights nor zebra crossings nor parking spaces and houses nor traffic signs, there would be first of all fewer deaths and injuries. Secondly, the residents would experience less noise, fewer emissions, less particulate matter and less aggression. Welzer states that such a city would not only be much friendlier and more sustainable, but it would also be one of rediscovering public space as a place of encounter. Public transport – a modular system of bicycle, call bus, regular bus, tram, suburban train, regional and long-distance train – could even become free

of charge. According to him, this would not even be difficult due to the elimination of subsidies for the car industry and the automotive infrastructure. His idea is to achieve a socio-political utopia in addition to the cultural and sustainability goals: the indiscriminate opportunity of participation in mobility for everyone in the city, regardless of whether they are rich or poor (Welzer, 2020).

A completely car-free city, or at least a city free of petrol-powered cars, sounds like a dream. Nevertheless, this is relatively unimaginable for a city like Linz, which is in a constant push for movement. The population in the city is getting older, and the possibility exists that not every elderly person living alone will be able to use public transport regularly. Therefore, alternatives to getting around in this sense are needed. Combined with impending population growth due to climate change and the desired proliferation of social housing options, people will also move frequently within the city center. A permanent move by public transport alone is probably unthinkable for most inhabitants of Linz. Moreover, Linz wants to remain popular for commuters. An intensive expansion of fast connections, as well as the already mentioned expansion of car-sharing and e-mobility offers are therefore desirable. A combination of public transport and e-mobility on the streets reduces CO<sub>2</sub> emissions, accidents and creates space for new ideas from the former overloaded parking spaces. Nevertheless, a change to cheap means of public transport would be relatively conceivable. The introduction of the climate ticket for public transport in Austria is already setting a start signal. Now, a cost-effective further development must be carried out so that all residents have financial claims to the use of the climate ticket.

### 3.3.4 Social Engagement

A relatively important approach in the implementation of the Innovation Program is the revitalization of public places to encounter zones instead of irritating traffic areas. The expansion of public places also includes the increase of exchange locations where citizens have the possibility to discuss openly in a group of peers about current social issues and exchange existing skills.

One way for implementing this need would be the platform „Linz can ...“ - a platform that is accessible to anyone and that highlights and appreciates technical, creative and entrepreneurial achievements of citizens. However, according to the Innovation Program, this platform is only planned to showcase already existing talents. There is often the feeling that specified content of businesses talk to little on a level of a general audience in order to create understanding of their work. They rather prefer to communicate on an established level on which the population cannot keep on track with. Therefore, the platform „Linz can ...“ would not only be of positive meaning if it highlights special achievements, but also gives the population the possibility that everyone can learn for and from each other. This should

also happen in a financial context where everyone – does not matter if rich or poor – can participate (Auinger, Auinger, Bauer, Langeder, Oberneder, 2018).

Furthermore, Harald Welzer states in “Everything could be different” that in a smart innovative city we have to rethink solidarity. Students from the University Sankt Gallen designed a model which makes solidary to the overarching motif that guides a global policy for the future. With the help of the 80/20 model citizens could use 20% of their worktime for social work, community projects, helping each other and activism, while they work the remaining 80% of their time in their usual jobs, and get the same payment. Studies showed that many people would like to be more socially engaged but they are lacking on free time next to their working hours or on financial opportunities. To implement more time for social engagement in people’s usual working routine would benefit the individual meaningfulness and anticipation of their jobs, their feeling for community and social cohesions and the training in empathy and perspective-taking. But it also strengthens the residents’ sense of self-efficacy and the “we-me” base (Welzer, 2020).



### 3.4 Linz residents' ideas about the future of the city

In the same interviews with eight residents about their individual picture of Linz, they were asked to imagine future scenarios about the city in 2050. Not only does the city move forward by 29 years, but the participants age as well and put themselves back into the change of these almost three decades. They were asked which socio-political events they can look back on and if they can describe concrete future scenarios for the 4 clusters of the Innovation Program. These interviews served to develop concrete future scenarios about the topics Industry and Network, Education, Transport and Social Engagement of Linz in the next chapter from an expert perspective.

Participants were asked to imagine themselves in the future. From this point on, they found themselves in the year 2050, looking back on the last 29 years of history in Linz. In the first question they were asked which events had taken place in the last 29 years and how they had influenced the inhabitants of the city. The answers and ideas of the interviewees varied in these questions. For example, it was mentioned that the music and art scene has developed further. It is no longer mainly led and dominated by cis-white men as it is in the year 2021, but there is gender equality and diversity in power positions. In addition, more festivals and safe spaces will develop in the cultural sector. Other ideas mentioned in interviews are hosting the Olympic Games in Linz alongside the other cities Vienna and Salzburg and developing events that connect the north and south of Linz. But also, the fact that there are better train connections between the north and the south, and that the city is ruled by cyclists and walkers.

Unfortunately, there are also not so positive scenarios related to climate change such as flooding and extreme weather conditions becoming the norm. Despite the fight against climate change and air pollution, there is still a desire to be able to swim in a clean Danube. According to the interviewees' answers, political conditions in Austria can also develop even more negatively. Nevertheless, there is a prediction that Linz will not be completely oriented to right-winged parties.

On the industrial side, Linz is seen as the only urban hub of Upper Austria. Digitalization and art projects have contributed to the city becoming an important hub of knowledge. The cityscape is mainly characterized by skyscrapers due to late capitalism. Global tech companies such as GAFA, Microsoft, Intel and Samsung are launching their brand offices in Linz and the city is becoming home to many international workers. It is imagined that these come from China, India and African countries, among others.

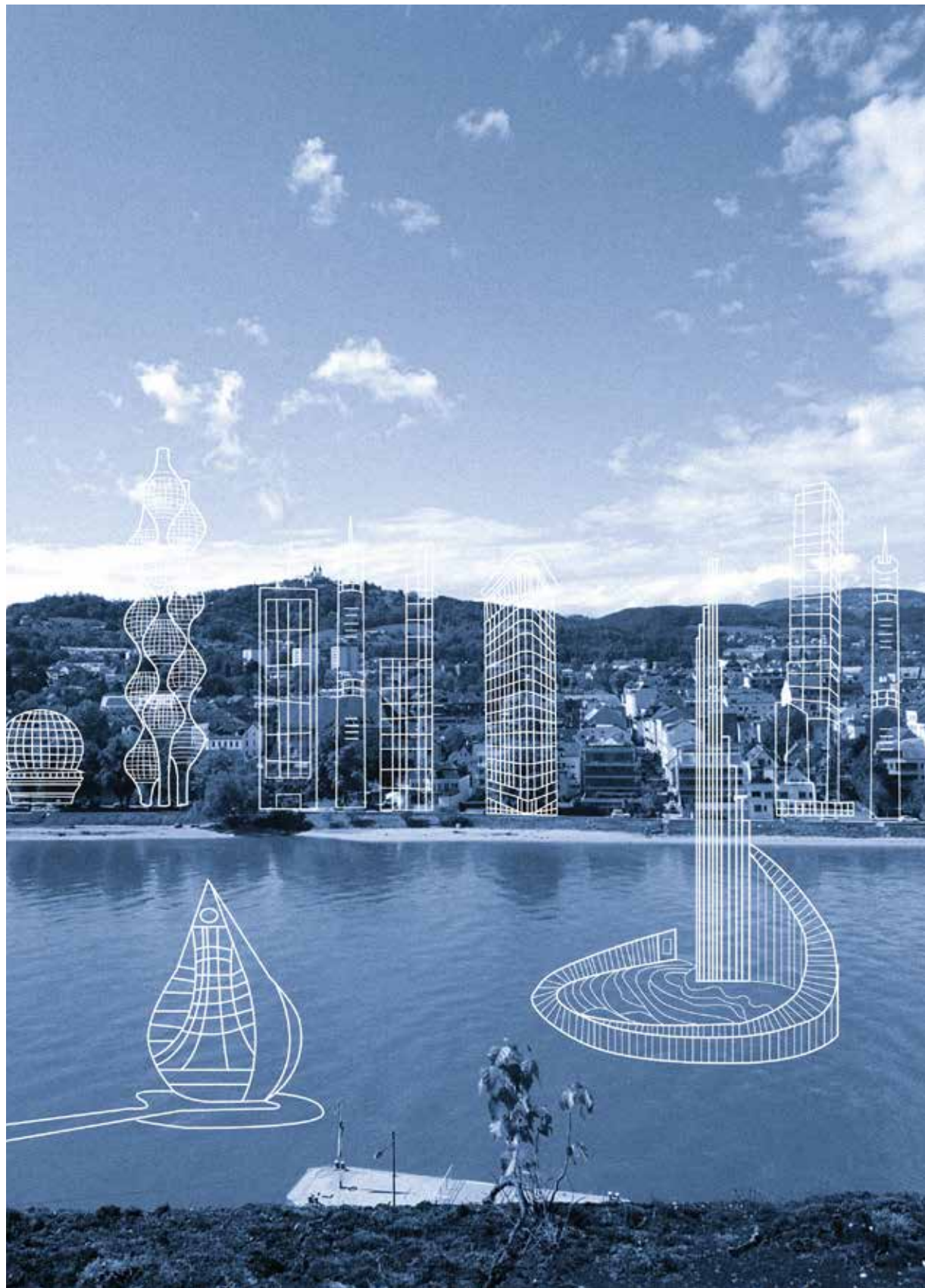
Secondly, the participants were asked what kind of people have influenced the city during this period of time and in what way. On the one hand, the interviewed participants think that above all young, optimistic people can change Linz in a positive direction. These are, for example, artists and engineers who make the city an international location for knowledge and art. But also highly trained doctors and

nurses show their work in the Upper Austrian hospitals. On the other hand, investors and capitalists see their fortune in Linz, as the housing market is currently relatively inexpensive and there is still potential to construct buildings. Politicians have as well a great deal of influence in making decisions that will hopefully turn out well in the eyes of the participants. They have the power to modernize the city together with artists, engineers, immigrants, and youngsters in ecological perspectives. The third question dealt already concretely with the description of future scenarios based on the Innovation Program. This question was about the industry and networking. How has our attitude towards work changed during this time? What does the job market, our work ethics, mental awareness, social benefits, and income look like? How will we work in 2050?

The participants wish for the introduction of shorter working weeks. The 40-hour week should be reduced to a 32-hour week or a four-day working week. There is also a desire for the establishment of an unconditional basic income and/or better pay for hard physical work. It is speculated that the population will mainly work in more diverse jobs, mixing industry with other sectors, and that there will be a greater emphasis on personal freedom. In general, more people will work remotely from somewhere else or from home-office. The hope is that by then gender equality in salary and childcare will be the norm. In other words, that just as many men take maternity leave as women, and for the same fraction of the given time. Mental health in particular is seen as an important role. Emotional and social intelligence is already on the school curriculum. Children and young people can thus learn different skills for respectful and empathic communication and avoid burnout and pressure to perform.

In 2050, the main industry in Linz will be soft technology. There are branches of global companies and Start-Ups. Linz will be home to many tech-interested people such as engineers, developers, product managers, investors, and designers. The global companies prefer their work locations in skyscrapers, and perhaps the workers of these companies also prefer to live in skyscrapers. There is a sad possibility that Linz will become the city with 24/7 opening hours because of its strong lobbies, and the lifestyle of the residents will become even more capitalistic due to their higher income. That's why not many people protest against it. Those who do could be reported to parliament in a dystopian sense.

Question 4 was about education. The participants were asked how a usual day of a student at a university would look like in the year 2050 and how this person would live. Because the industrial world will change, there is also a change in the education sector. The universities of Linz will transform mostly on a technical level to a practical education in coding, design, and computer science. Multidisciplinary courses will dominate the education sector and there will be more exchange between departments. An expansion of the JKU will take place and more common spaces for students will be established, less in rooms with fixed walls and doors. The campus will be enlarged to provide more space for individual workplaces too, i.e. more individual student desks and sitting areas.



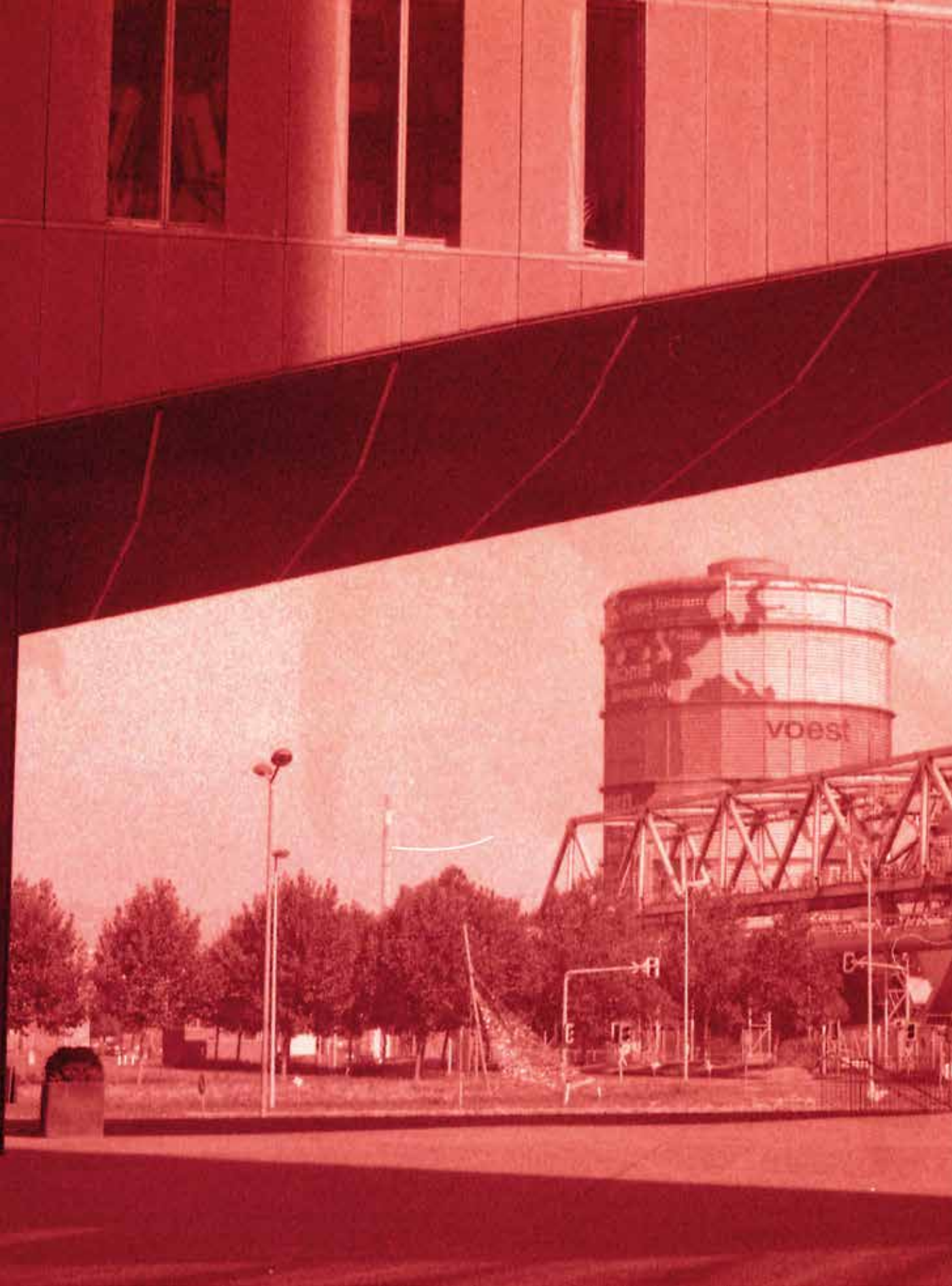


The future and its upcoming challenges play a major role in education. The world as a social, political, and technical environment will be built into subjects even more. There is also cross-institutional work in the industrial sector. A dream would be for JKU to dominate the international study market to such an extent that students are paid to study there because they later work in high quality jobs and are in great demand on the labor market. Unusual fields of study such as space biology and space engineering could also develop as research on other planets will no longer be uncommon for the population. But separate departments for sustainable development and environmental resources will also develop and play a crucial role for industry in Linz.

Next, participants were asked how we will move forward in Linz in 2050. What forms of transport will we use to get from A to B? And how does transport influence the life of the inhabitants? They imagine Linz in 2050 to be largely car-free. Bicycles, walkers, and public transport dominate the travelling routes. There are enough bicycle racks in front of all shops and public buildings. Even the participants who cannot imagine the city car-free think of a combination of public transport with individual transport and personalized public transport such as e-scooters and mini-buses. E-scooters are part of the city infrastructure and people can use them for free. Maybe commuters will switch from cars to public transport since car parks are only accessible from outside. Individual transport will be primarily fossil fuel free and electronically powered. It can also be imagined that the tram network will be enlarged, and they will travel in many more directions instead of just crossing the main train station. The trams and trains have a self-driving system, except for the famous Pöstlingbergbahn as a landmark of the city. This still has the same design and is operated by humans.

The last question is about the social activities in Linz in 2050 and the platforms residents will use. Most participants referred to social media rather than the physical gathering in the city. However, social media can still be found as an important factor in the city infrastructure. For example, there could be new app pop-ups to find people who share the same interests in the city. Still, it is hoped for less advertising and clickbait on platforms, or ads you pay money for are fully resolved. Another answer was the use of Google Glasses. Already today, the Innovation Hauptplatz in Linz has an own office and an online platform where residents could post their opinions about the city in 2020. In the future, Linz will develop its own app that connects all important aspects of Linz: voting, buying food, news, and event organizations.

In summary, it can be said that the people interviewed have a relatively realistic picture of the development of Linz in the future. One could also say too realistic. A lot can change in a city in almost three decades, and other unforeseeable events can radically change the lives of the inhabitants. We hope for a positive image of the city in the future, where there is equality at all levels. Industry plays an important role in the lives of residents, but the city is no longer manifested by industry but by innovation in the cultural sector, in technology, in education, housing, transport and our communication with each other (Hirtenfelder, 2021).





2050

2050

2050

# Speculative Linz



# Linz 2050

## Chapter 4



In the context of 4 future scenarios in the thematic areas Industry and Network, Education, Transport and Social Engagement, we accompany a co-parenting family, consisting of two queer parent couples, three children and a grandmother, through their everyday life in the year 2050 in Linz. Although the stories are presented as a heterotopia of the future, there are some challenging events that the population has had to contend with in recent decades. Central problems are mainly related to climate change and the flow of migration that accompanies it. Some industries have had to radically change to sustainable developments that are free of emissions. Speculative Linz shows one way in which the city can develop positively if it prepares for these changes. In doing so, the people of Linz must now work together and keep their eyes and hearts open.

We are in the year 2050. In the last 3 decades not only have a lot of events happened in the city of Linz but we as residents have also aged by a few years. Linz has been able to retain some of its alternative spirit of the past, but it has definitely transformed itself from the dirty industrial city it was almost 100 years ago into a cosmopolitan, innovative, social city.

Just 30 years ago, Linz connoisseurs still described the city as provincial, traditional and industrial. But also as creative, modern and with potential. The main attraction for tourists was mainly the Ars Electronica Center, and especially the surrounding green areas of the Donaulände, Pöstlingberg, Bauernberg and Schlossberg were highly valued by the inhabitants. But today, in 2050, the city of Linz has much more to offer than in its past.

A lot has happened in terms of social events in the last few decades. For one thing, the Covid-19 pandemic in the 2020s had an immense impact on coexistence in the city. It took almost five years to get the virus under control. Various vaccines were developed, and compulsory vaccination was introduced, which society initially resisted. Nevertheless, it took years before the corona crisis could be contained with the help of even more developed vaccines and medicines. Thereafter, the European Union paid much more attention to containing emerging viruses with various measures even before a next pandemic broke out. Thus, the corona pandemic remained the worst in Europe in the first half of the 21st century.

With the compulsory vaccination in Austria against the Covid-19 virus even more right-wing pressure built up. This was felt not only in Austria but throughout Europe. Especially when climate flight from some European and Non-European countries occurred for the first time in the mid-2030s. Climate change also showed its effects on the Upper Austrian capital. Severe thunderstorms and flooding, especially in the summer months when there are prolonged periods of heat and prolonged periods of rain, became the norm. Fortunately, the city was able to counteract all this in time in its planning of new buildings or the conversion of new forms of housing. Certain measures were taken, and initiatives established to protect Linz from widespread

climate disasters. The city was even able to use these climate events to generate wind and water energy.

Despite everything, Linz is located in the heart of Austria, and its inhabitants benefit from its location around green spaces, lakes and mountains. The European Union joined forces at the onset of the climate refugee crisis and put together a certain budget to help the population and raise awareness. Climate refugees within the EU come mainly from southern regions such as Sicily, where people can barely live because of rising extreme temperatures. But many also come from Croatia because of the increased number of earthquakes there.

In 2040, the state of Austria took very special measures to counteract climate change even more intensively. For two years, the population lived meat-free for the first time. Only meat from farmers was allowed to be consumed for their personal consumption. After the meat-free years there was hardly any demand and, in the meantime, meat can also be produced by machine by the countless Start-Ups in Linz using technology to prevent animal suffering and the production of CO2 emissions. This form of meat also became the norm in the supermarkets of Austria.

The city benefits economically mainly from its innovative technical field. The Start-Up scene

in Linz now counts as the Silicon Valley of Austria. Digitalization is so visible in society that in 2050 nothing will be possible without it. This can be seen, for example, in the decline of print media. Print media is already history in 2050, and social media is now also fully used as educational media in schools. People are generally much more enlightened by social media. However, it became very quiet on the streets of Linz for a while. Especially when the right-wing pressure increased immensely, and people feared for their safety of freedom of expression at demonstrations. In the 30s, most demonstrations took place only online. However, this changed radically again with the emerging climate crisis. People again dared to go out in groups onto the streets and demonstrate.

Although cash has been used in Austria for a comparatively long time, everything was digitalized from 2025 onwards. In the years that followed, cash became a historical document that is no longer worth anything in 2050. It is even exhibited in museums of contemporary history. Residents of Linz can download a certain amount of „Linzcoins“ every month, which save them quite a bit of money in daily use. These are accepted in restaurants, bars, supermarkets, etc., and reduce food prices by a discount of at least 30%. Linzcoins are equally accessible to everyone with their main residence in Linz, and lower-income families in particular benefit from them. Not only the Linzcoin, but also the unconditional basic income benefits the population. This allows basic financial equality at all levels.

Economically, Linz's Start-Ups also found a market in space technology. Investors and companies are now putting more and more time and money into exploring Venus as a habitable planet. This also led to the development of new courses of study at the universities in Linz, such as Space Engineering and Space Biology. The Johannes Kepler University became one of the most sought-after in Europe, receiving numerous applications from prospective students from all over the world every year. The Silicon Valley of Austria has also seen an increase in global tech companies, such as GAFA, Microsoft, Intel, and Samsung, which now have branches in Linz. These are privatized companies, but overall make the city even richer, and many new alternative economies such as the unconditional basic income and a 30-hour week have been established.

In terms of transport, Linz became completely free of petrol-powered vehicles. The city center is even car-free for the most part. There have been some experiments in public and individual transport. Such as the flying taxis that were introduced annually for a while during the Ars Electronica Festival. However, the government saw too much effort in maintaining these vehicles in daily use, and then switched back to e-vehicles, bicycles, and public transport. Public transport became even better developed and reduced the commuter traffic problem considerably.

Despite pressure from right-winged parties, Linz remained politically social democratic throughout. The inhabitants have learned to deal with social crises and appreciate open and friendly cooperation. New forms of social engagement established and the gap between rich and poor has narrowed thanks to efficient economic measures. The population remained straightforward in its opinions, but is willing to help, and social equality became increasingly common.



# Characters



## Mothers

Mother 1 (she/her)

Age: 46 y.o.

comes from: Sicily

Job: Founder Start-Up

Mother 2 (she/her)

Age: 50 y.o.

comes from: Austria

Job: Ars Electronica Futurelab

\*couple who already knows each other for 20 years

\*\* met each other on a holiday in Italy

\*\*\* having their three kids together



**Luca (they/them)**

Age: 12 y.o.

student middle school

**Simon (he/him)**

Age: 7 y.o.

student primary school

**Saskia (she/her)**

Age: 18 y.o.

student JKU





### Grandmother (she/ her)

Age: 83 y.o.

comes from: Sicily (climate refugee)  
still quite fit but cannot do  
everything alone

### Fathers

Father 1 (he/him)

Age: 50 y.o.

comes from: Germany

Job: Sales Manager

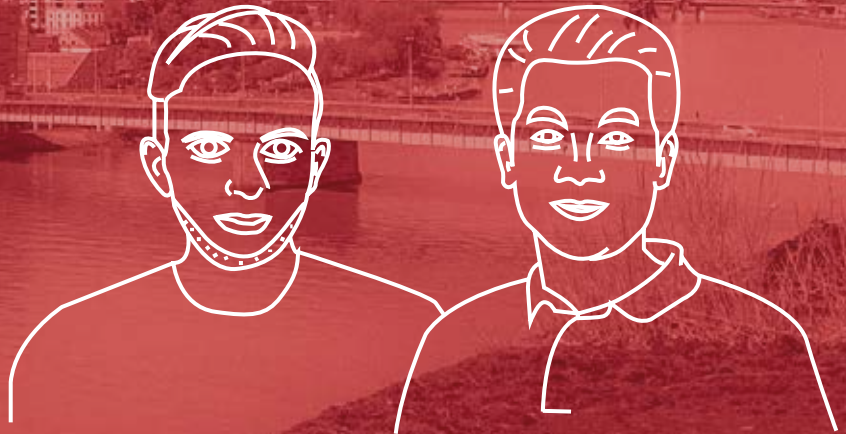
biological father of all kids

Father 2 (he/him)

Age: 56 y.o.

comes from: Japan

Job: Voest Alpine



\*couple who met each other 5 years ago

\*\* live in the sub-urbs of Linz

## Industry & Network

One of the mothers in the family has been employed at the Ars Electronica Futurelab - Ars Electronica's research laboratory - for several years now. In recent years, the Futurelab, as a sub-company of Ars Electronica, has become more detached from client operations. With the help of sufficient municipal financial support in the cultural sector, the company has been able to focus fully on autonomous creation in the Media Art scene again. All employees, including the mother of our family, now work only 30 hours a week. Since the Futurelab has grown to 60 employees, it has become easier to divide up the work and support each other in different areas. The already experienced employees, who have been part of the company for a long time, particularly appreciate this, because they benefit from the reduced workload in projects and have more time for their families. But also, the young, innovative minds of the team appreciate it very much that they can work in different areas. The number of women in the Futurelab's technical developments, for example in the areas of robot interaction and artificial intelligence, is particularly remarkable. In recent decades, Ars Electronica has changed the gender equality ratio in management positions, which has had a positive effect on mental health in the company. The 71st Ars Electronica Festival has just taken place but plans for the Lab's 55th anniversary are already in the pipeline for next year. But before the work begins,

the company treats itself to the annual Lab holiday, which has taken place for the first time in 2021. In the following years, the company mainly booked retreatment holidays for its employees. These have also been maintained, but for this year the Futurelab is also allowing itself a research excursion to the Upper Austrian Space Station. For the following anniversary, more of the space cooperation with regional Start-Ups will be actively shown to the visitors of the festival.

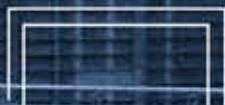
By the year 2050, an even more rapid growth in the Start-Up scene could be discovered. In contrast to past decades, a comprehensive range of business consulting services and links between established companies and Start-Ups has been created. As the small Silicon Valley of Austria, Linz's large companies now refer to regional founders and pay more attention to risk-taking. Above all, experiments with the sustainable production of food, such as meat that is technically produced by machine instead of from animals, has caught on. But more Start-Ups have also been launched in the social sector. The second mother in our family is also a founder of one of these Start-Up in a more social field. During her pregnancy with her youngest child Simon, she was able to build up her communication platform, which benefits the residents of the city of Linz, without any problems. Mainly the unconditional basic income made this

possibility available to her. She appreciates her flexible working hours, which she carries out partly in her affordable studio location in a former industrial building at the harbor and partly from home. Due to the internationalization of the city, she quickly found connection with the population when she moved from Sicily to Linz 20 years ago. The unconditional basic income helped her to financially support her family, who later came to Linz as climate refugees. But it also gives her more time for a healthy work-life balance and leisure activities with her children.

One of the children's fathers can also benefit fully from the unconditional basic income. He came to Linz from Japan a few years ago to work for Voest Alpine in the area of sustainable steel production in the factory. This is often a physically difficult job that is executed over several years. With the help of the unconditional basic income and fair pay for hard physical activities, he was able to reduce some of his shifts at the factory. His partner and second father of the children works as a shop assistant in a local supermarket. The technological upheaval in all industries is also visible in his work. The salesman's job has changed, especially in his daily activities. Instead of laboriously standing at the checkout for hours serving customers, he is now much better able to use his communicative talent as an advisor and helper when customers are shopping. Customers now exclusively

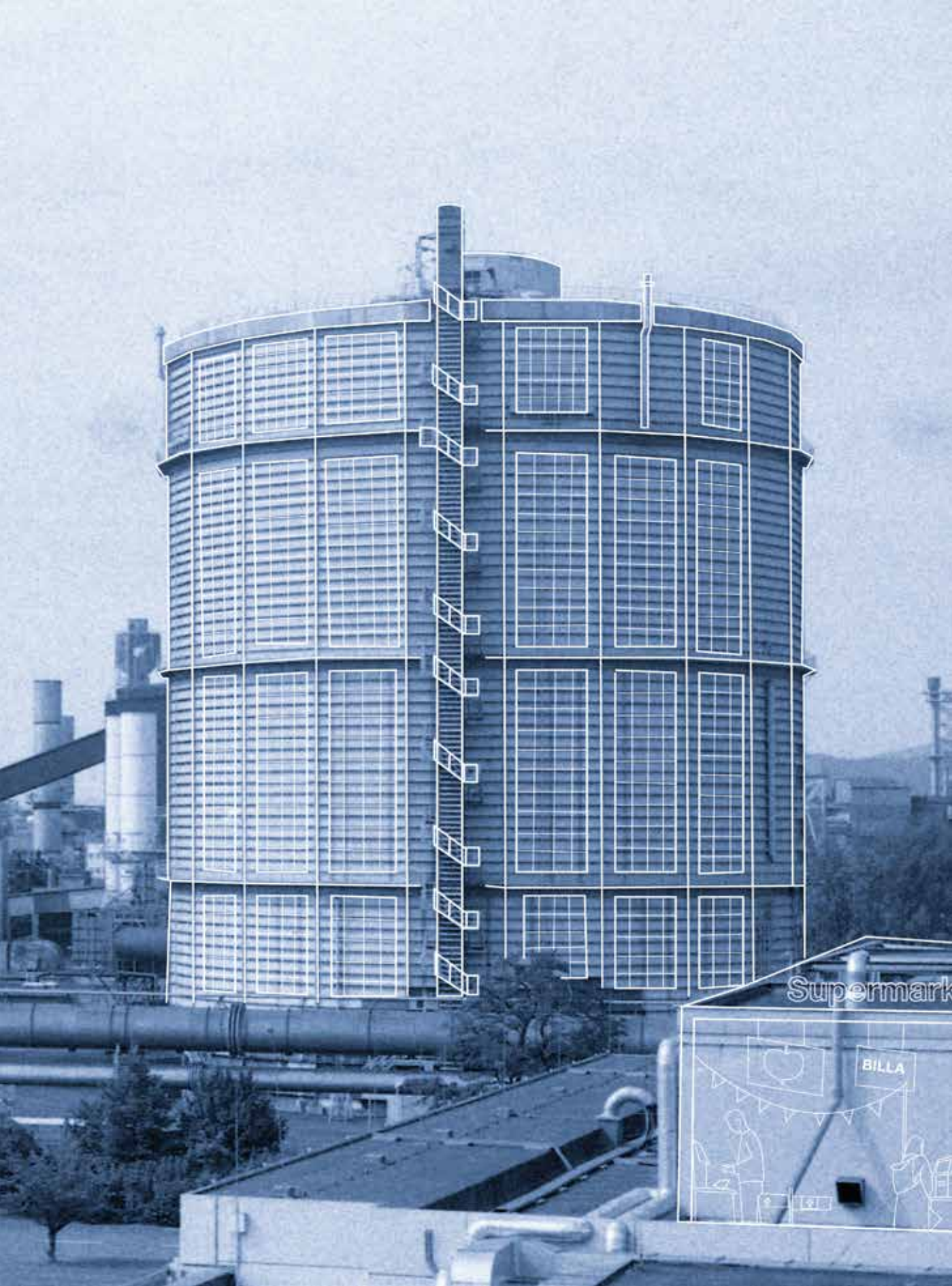
use self-service checkouts, or order their groceries online via app. Much of the food now sold in supermarkets is locally grown. The chains work much more closely with food producers in the region. This has given the supermarkets a better overview of what is bought by the residents of Linz, and food waste has been largely avoided. The long way and the exhaust fumes that were sprayed for longer periods of time are rejected by most of the residents in Linz. If there are large quantities of food that have to be thrown away, the supermarkets cooperate with food sharing organizations that process the products for socially weaker families. Most of the products have now been described in English as well as German due to the internationalization of the city and the improvement of language skills.

# Start-Up Factory



71 Years  
Ars Electronica  
Festival

9 - 11. 9. 2050  
Linz



Supermark

BILLA

## Education

Saskia is a first-year student at the international renowned Johannes Kepler University in Linz. The university itself has gained three times the number of students in recent decades as it is the only university in Austria to enter a very future-oriented technical field. Every year, a vast number of prospective students applies from all around the globe. JKU is one of the leading innovative universities in Central Europe.

Saskia lives in a tiny house on the opposite side of the industrial harbor in Linz. Due to the large number of applications in recent years, the university campus had to expand and built on parts of the previously unused land next to the Danube. Her housing option is offered to her by JKU during her studies. The tiny house settlement next to the new university campus consists largely of old containers from the industrial port. While these used to be used to transport goods of the steel industry, they now house people.

Saskia shares her living space with another flatmate. The container is very practically furnished. Her sleeping accommodation is only small and has a mattress, but there are countless practical storage options and pull-out furniture in the kitchen and living room that make it quite comfortable for the two of them. Not only does the university campus itself has a huge garden with fields and

greenhouses and is run by students, but the tiny houses themselves are equipped with gardens on the roofs for local food production. Saskia enjoys being part of the urban gardening group of JKU and is happy to have low-cost food options. Not only tiny houses are offered as housing for students, but also houseboats and flats in former industrial buildings. Most of the energy the houses need comes from water energy of the Danube.

By the year 2050, the expansion of the Johannes Kepler University has brought with it quite a few things. For Saskia, a common university day is usually split between online and face-to-face classes. The students at JKU have been innovators since the beginning of their studies. On the one hand, these courses are designed to be very practical with learning skills in coding and computer science, but there is also plenty of room for experiments in the various labs of the academy. On the other hand, theory courses, in which the students have to work out speculative theories of the future, are also very common.

Saskia is currently in the first semester of her studies for Space Biology. JKU realized twenty years ago that it should also specialize in space technology, among other things. Saskia is particularly looking forward to taking a trip to the

university's space station towards the end of her studies, where she can get to grips with resources from space even more extensively. Since the university already has so many successful graduates, most of these high-skilled students are already paid during their studies and work together intensively with established research, as well as technical institutions in Linz.

The spatial character of the university is very bright and freely accessible. The rooms are now less divided into classrooms with walls and more into freely accessible areas where students can work together in an interdisciplinary way. The university's countless labs offer Saskia space to share skills with other students. Nevertheless, due to the expansion of the university campus, every student has also their own work desk.

At lunchtime, Saskia likes to treat herself to an inexpensive meal in the cafeteria, which comes from food grown in the aforementioned university garden. Sustainability is not only important to JKU in its offered food possibilities, but also in its fields of study. Fortunately, the university has already taken action against climate change in time and developed a department for sustainable technologies that supports the production of food and the surrounding industries in innovative developments.

As the daily study routine is often time-consuming, it is important for the university to offer its students a range of activities. A place to recharge their mental batteries is also included in the system. Students have the opportunity to attend psychotherapies at their university for free, and therefore suffer less from burn-out and other mental illnesses during their years of study.

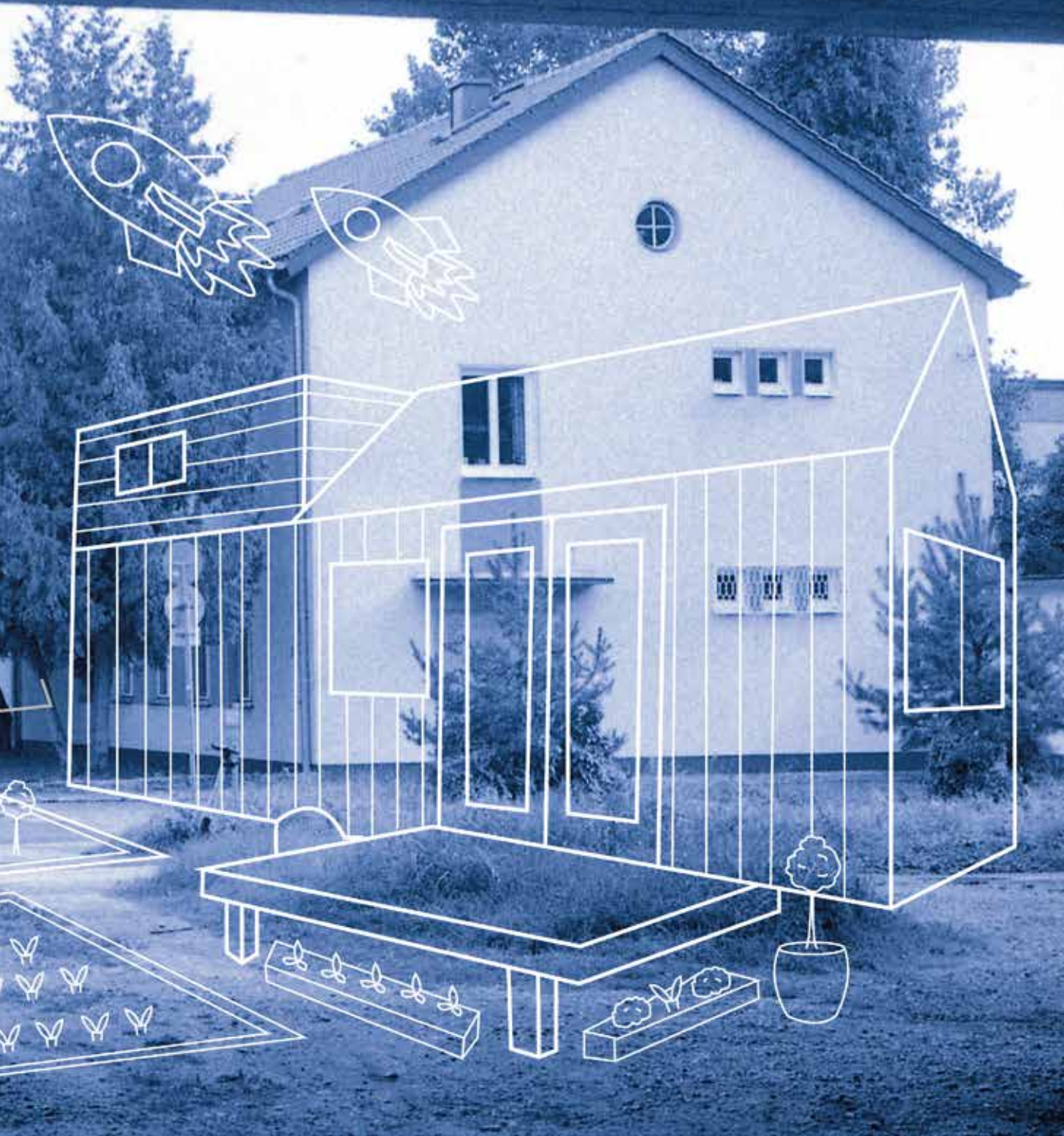


JKU

Space







## Transport

Half of the family - i.e. the two mothers with part-time residence of their two youngest children Luca and Simon - have only recently changed their place of staying to the largely car-free city center. Due to the emerging migration flow evoked by climate change in recent years, new residents are constantly coming to Linz. Even those who have lived here for many years change their place of living frequently. The inhabitants of Linz are nomads, no one lives in one place for too long. But moving appears often difficult because large pieces of furniture are hard to transport in car-free zones. Our family is therefore very happy to have access to any transport alternatives through the „Linz drives“ app. The „Linz drives“ app has become part of daily life for all Linzers. Residents can, for example, book e-moving options, use e-car sharing, e-scooters, rent individual self-driving e-taxis - which are mainly intended for the older population - but also any public transport route is visible on it. For the co-parenting mothers, it was therefore obvious to also use the e-moving option, which changes the image of the city in a sustainable and emission-free way.

In recent decades, an ageing process of the population of Linz could be observed. Thanks to advanced medicine, diseases such as Alzheimer can be contained for the most part, and the older population still presents itself as a very fit one. Nevertheless, many activities can no longer be easily carried out by them alone and they need help in the transport system. Recently, the „Linz drives“ app introduced

a new service for these kinds of customers. The ageing population can now very easily order self-driving e-taxis to their front door with a click in the app.

The older population of Linz benefits from the low-cost alternatives in the daily infrastructure. The introduction and further expansion of the climate ticket in Austria almost 30 years ago made alternative transport options child's play. The addition of new alternatives almost every year has reached the majority of the population in a sustainable way. By eliminating vehicles powered by non-renewable energy, Linz not only became far less polluting, but transport also became cheaper. Due to the elimination of subsidies for the car industry and the automotive infrastructure, pensioners and students in particular can now travel even more cheaply. Also, the grandmother of the family benefits from the self-driving e-taxis to carry out her daily trips to the supermarket, to the doctor and to visit her grandchildren.

The public transport system has been significantly expanded in recent decades. Not only are there now fast connections within the city between focal points such as the JKU, the Ars Electronica Center, the railway station, the Tabakfabrik and the industrial harbor, but commuters from surrounding neighborhoods also find it much easier to reach their workspaces without stress. Solarcity was already a particularly popular affordable residential area for families several decades ago. The

development of further building complexes of this kind attracted even more families to the quiet suburban areas of the city. The co-parenting fathers of the family also live in one of these sustainable building complexes, which are powered by solar energy and sustainably designed. As commuters, they use fast trains to their workplaces, but if there are larger goods to transport, they also have the option of using an extensive e-car sharing network. The e-cars often do not transport them to all parts of the car-free zones, but there are still special parking spaces and sufficient charging stations close. This not only beautifies the cityscape, but also makes the streets of Linz quieter, less polluting and safer. Public places that used to be filled with cars can now become friendly places to meet. The family also likes to take weekend trips together into the countryside, where there is not always an appropriate rail connection. E-cars are also very suitable for this because batteries can now be recharged for endlessly long periods of time and are more practical to use thanks to numerous charging stations.

12-year-old Luca usually jumps on their bike to get to school in the morning. They benefit especially from the upgraded bicycle lanes in the city, and from the renewal of the roads from stone floors to asphalt. In front of every public building, vital points, and shops there are now also sufficient bicycle racks for the cycling population of Linz. Luca therefore has no problems finding enough space to park

their bike. Saskia also benefits from the extended wide bicycle lanes due to the minimization of cars on the roads. To get from A to B she often uses e-scooters, which now no longer cause accidents on pavements as in past decades but have space on the wide alternative vehicle paths. She finds it especially great that these have now become so much a part of the infrastructure. The „Linz drives“ app offers them free of charge for a longer time-period to enable even lower-income residents to get around quickly and breath some fresh air while driving.

Safety on the streets plays a major role in Linz. The parents of the family are very happy that they can also take 8-year-old Simon, the youngest in their family, to school safely and without stress. With him, they mainly use public rapid transport, as well as the bicycle or they walk. With the expansion of e-transport, public transport and bicycle lanes, and the reduction of exhaust fumes and maintenance costs of car parks and roads, the city of Linz could finally rid itself once and for all of its reputation as a dirty industrial city of the past. Different social classes are assured affordable transport through the climate ticket and the „Linz drives“ app. This promotes social equality in transport and ensures safety on the roads.





*Linz-drives.com*

## Social Engagement

A major change in 2050 compared to previous decades is the expansion of public spaces as meeting zones. This also includes the increase of exchange locations where citizens have the possibility to discuss openly in a group of peers about current social issues and exchange existing skills. Due to the extreme right-wing pressure in past decades, it was often a problem to express one's opinion in public and to live it out at demonstrations against social crises. That is why it is now even more important for the population to create such places of encounter. Today it can be said that Linz has overcome many socio-political challenges and that its diversity is flourishing. Through various small revolutions in the past, Linz has been positively transformed by optimistic and motivated people of all ages and professions. Artists and engineers changed the cityscape and made Linz an international hub of knowledge and art. The health system was also expanded by qualified doctors and nurses, and age-related diseases such as Alzheimer's and dementia in particular were curbed. Advanced medicine and the city's prosperity allow residents to live to an average of over a hundred. Immigrants gave a new polish to the city's culinary arts. Politically, Linz remains socio democratic. The great crisis in the growth of right-wing parties and organizations in Austria in the past has been well overcome and is now much diminished.

Capitalism and the consumer society were sustainably curtailed by the residents. Instead of consuming disposable products and mass-produced goods, the population of Linz now use their income for leisure activities in the city's countless sports, creative and social clubs. Due to their state

of health, and advanced technologies, the population accordingly works longer and reaches a higher age at the time of their part-time retirement. But thanks to new economic structures, residents also work less on average, and can devote more time to social engagement. One reason for this was definitely the introduction of the unconditional basic income, which ensures social equality and reduces the gap between rich and poor. Now lower-income families can also be part of social activities that they could not afford before. But it is also reflected in the choice of occupation. The offspring of wealthy families now feels less compulsion to go to university and chooses manual jobs. The inhabitants of Linz feel less pressure to perform, and the end of meritocracy has come.

Another reason for social engagement and the reduction of capitalism was the introduction of the 80/20 model. People have learnt to devote themselves again to the primary importance of living: a friendly and helpful interaction with their fellow human beings. One of the mothers in the family deals with exactly this model in her communication Start-Up. She offers her advice and support to companies of various kinds with the 80/20 model, where employees are asked to execute 80% of their job activities normally and 20%, they engage for social projects within the company. With her Start-Up, the mother organizes various projects where clients can engage transdisciplinary in various fields. The employees are still paid the same income by the company, but now appreciate being able to contribute more to social services, which was not the case before. The positive change is mainly seen in the way employees can appreciate their job again and feel an individual

meaning behind it. The 80/20 model trains employees to strengthen their sense of community and empathy. From the previous pressure on the individual to perform in times of meritocracy, companies now focus much more on togetherness and the successes achieved as a team. Hierarchies in companies have been reduced to a large extent and employees meet their bosses at eye level.

The fathers of the family also benefit from the 80/20 model in their jobs. The father, who is an employee of Voest Alpine, can use a few hours of his working time to help clean up the water in the Danube. For some years now, it has been possible to swim in the clean water next to the industrial area of Linz again. Voest Alpine sees it as its responsibility to address the climatic problems of Linz. The company is particularly committed to counteracting storm disasters, filtering the water in the Danube and using it to produce sustainable energy for their own use. But it is also important to do something for the population and to clean the water so that the inhabitants of Linz can swim in clean water again.

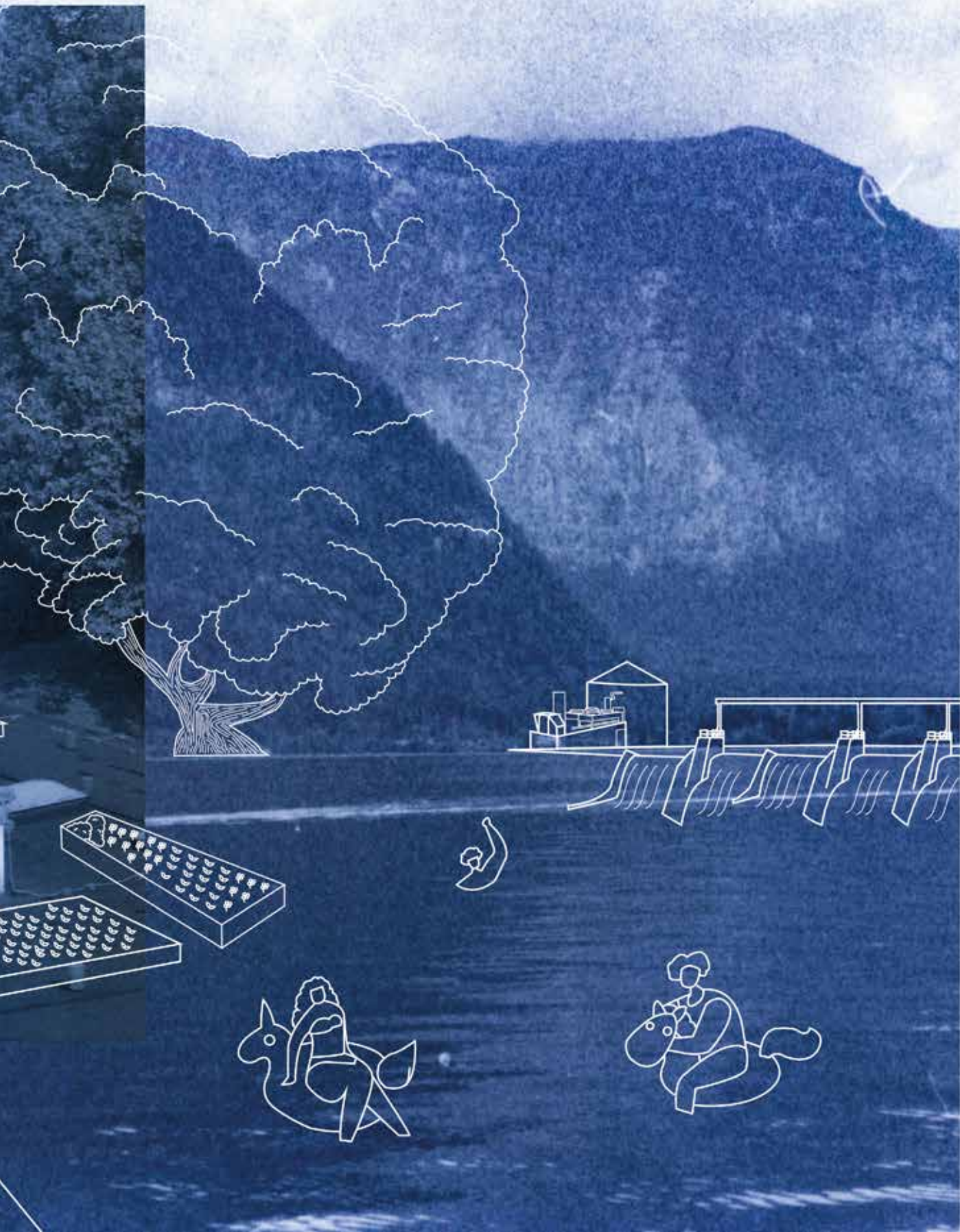
The second father of the family is after his shifts at the supermarket particularly committed to ensuring that leftover food is no longer thrown away. Together with other employees, he supports food sharing platforms, which have become common use. All of Linz's residents use them several times a week. Thanks to the unconditional basic income for the population of Linz, socially weaker classes no longer have to rely on it but almost all residents of Linz became aware of the need to avoid food waste.

As a part-time project at her university, Saskia is primarily committed to transforming former parking lots for fossil fuel-powered cars into urban gardening spots. Since the population of Linz mainly uses public transport, and not so much parking space is needed for e-cars, there are some free-standing concrete areas that are now sustainably transformed to areas of local food production. The inhabitants can rent fields in these areas for a low price to produce their own vegetables and fruits. Moreover, the residents who do not own their own field can purchase healthy foods through the „Linz eats“ app. In doing so, the residents save themselves long transport routes and value only organically grown food when they shop.

Something else that has become established in Linz in recent years is the number of safe spaces for a wide range of diverse people. Active alongside her work at the Ars Electronica Futurelab, the other mother of the family is also committed to create such safe spaces. She is part of the organization for festivals that showcase more diversity in the city. A few decades earlier LGBTQ+ parties were still a rarity in Linz, as were parties open to women alone where they were no longer hassled on the dance floor. Years before, it was conventional for young women to regularly experience sexual harassment at events in Linz. Through their social commitment to gender equality, artist run spaces in Linz are now no longer dominated only by cis white men. There is social, cultural and gender equality at all levels in the art scene. Also, there are hardly any differences visible in the music and party scene anymore.









## Conclusion ▪

At the beginning of this work, we looked at how the history of Linz contributes to the effect of its image on the outside world. The starting point was the city's industrial port. More than that, we looked at certain key moments in Linz's history that contributed to its reputation as a dirty industrial city in the past. But with the start of the 21<sup>st</sup> century and the nomination as European Capital of Culture in 2009, it was possible to establish for the present moment that Linz is anything but the polluting industrial city of previous decades. In eight interviews, Linz connoisseurs rated the city as modern, creative and with potential. They especially appreciate the city's many green spaces, and the quick escape into nature from the exhausting daily work routine. Moreover, despite the limited space, there is always

something new to discover in the city. However, it is reflected that many views of the inhabitants are also devalued as traditional by our interviewees. ▪

The Innovation Program of the city of Linz was examined more closely for this purpose, and here, too, we noticed which aspects had not been highlighted enough for the residents. For example, there is great potential in linking Start-Ups with established companies and research institutions, and in creating places that become a home for new ideas. In the area of infrastructure, the expansion of public rapid transit and individual transport such as e-cars and car sharing should be ensured. In the field of education, a regionally appealing program for students and cooperation with businesses should be created. Linz is to be transformed from a university city into a student city in the next few years, where young people can settle in the

city through affordable creative forms of housing. Socially, there should be more places for people to meet, where talents and knowledge can be exchanged. ▪

However, there are also some remarks to be made about the Innovation Program. Such as the inclusion of unexpected events in our society and the increasing climate crisis, which will also bring a flow of migration. Furthermore, the Innovation Program focuses on a technical bubble in which art and culture are only a sub-area, although tourism lives precisely from creative activities. A general approach to a broader audience is also still lacking. ▪

The same eight interview partners were used to create realistic future scenarios for the population of Linz in 2050. The results were partly full of inspiration about a change of society in the fields of Industry and Network, Education, Transport and Social Engagement, but partly they were still very much focused

on the present time. Nevertheless, the interviews were crucial for the story of a co-parenting family that finds its center of life in Linz. In the elaboration of four possible future scenarios, the current population of Linz was addressed in particular. The work tried to include several aspects around the urban development of Linz and is in turn the starting point for the development of a project that should primarily address the residents of Linz itself. The aim is to accompany them into spaces that let them travel like a time machine to the year 2050.▪



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*all other images taken by Denise Hirtenfelder*





Denise Hirtenfelder (\*1997) is an Austrian conceptual artist and future narrative designer. She describes herself as an artistic match-maker and puzzle builder since she does not focus on a certain medium rather than on her position as a communicator and collaborator. Hirtenfelder's projects explore a field in-between art, design and research. Between 2018 until 2020 Hirtenfelder has been responsible for creative directing tasks for the fashion & art platform *eyes&ah* that supports and connects young upcoming artists. In 2021 she worked for the Ars Electronica Futurelab in Linz in the area of content management.

Speculative Linz was part of Denise Hirtenfelder's Minor Project New Frontiers at the Willem de Kooning Academy in Rotterdam, and lays the foundation for her upcoming graduation project in the Bachelor (de)Fine-Art.

A city with an unconditional basic income? A model in which each of us effectively uses some of our working time to engage socially? A city with such renowned courses of study that we even get paid to attend university there? The Silicon Valley of Austria? And still enough money to provide social equality and a low-cost life for everyone?

Linz is a city where work and prosperity have always flourished. Nevertheless, the city's reputation as a dirty industrial city in the 20th century still influencing the image we have from it from time to time. That this is no longer the case can be countered not only by its international notoriety in the arts and culture sector, but also by the feedback from residents who describe Linz as a modern and creative city with potential.

The city council plans to transform Linz into the most innovative city in Austria. But how can the image of an industrial city change into that of a social innovation city of the future? Speculative Linz shows a general picture of the city in 2050, supported by four other future scenarios presenting the life of a co-parenting family. How could Linz change positively in the next 29 years if we master various social challenges in almost three decades as a community and create social equality for all? For what aspects in the areas of Industry and Network, Education, Transport and Social Engagement could the city become a new hotspot for innovation?

