
Case Study Report

Active Kernen

Design of an integral scheme for healthy lifestyle in South Germany

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Abstract

Germany holds one of the best public health systems of the world. However, with 11.5% of the national budget, it is per-capita the most expensive in the 'EU, according to data of 2009. The expenses may reach 500 billion Euros per year by 2025. At the same time, the aging population in the inverted pyramid of the demographic distribution forecast a progressively increasing dependency on social and health services of this growing group. But also, the white collar productive share of the population, typical of the service sector of industrialized economies, contributes to an increased health cost due to inactivity, obesity and burn-out related diseases. What role can planners play in developing short and middle term solutions for these increasing challenges? This case study introduces a series of initiatives that are being developed in a suburb of the metropolitan region of Stuttgart. They propose the collaboration of non-profit initiatives, exercise and community-binding activities as a key to a better use of the physical infrastructure in the city, which combined in an integral structure can become an asset for a healthier and stronger society.

Keywords

active city, exercise, citizens engagement, health care

1. Background

The Rems valley, Rems-Murr district, Kernen im Remstal city

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The valley of the river Rems has a length of 78 km and connects three districts in the metropolitan area of Stuttgart. It is as well a leisure area. The river itself is a tributary of the Neckar in Eastern Baden Württemberg.

Remarkable in the Rems valley are its excellent wines, which are concentrated mainly in the wine region Weinbaugebiet Württemberg and the Württemberger Weinstrasse. The Rems valley hosts 45% of the best wineries of the federal state Baden Württemberg. The valley cultivates also many cultural and natural highlights.

Along its course, the valley incorporates many trails for cycling and hiking. The most important are the Remstal path (215km, connected to Kernen im Remstal), the Limes path (partially in the Rems valley) and the Remstal cycling path (76km between Essingen and Emseck). The Württemberg cycling path incorporates the Kernen neighbourhood of Stetten. (Marcopolo 2019)



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In Rems valley, the bicycle is a popular and cared means of transportation. The community in the neighbour cities has started to promote cycling in the last years with several activities. Using the bicycle as healthy and emissions-free means of transport is one of the recommendations for sustainable mobility of the current coalition in the federal government. It is efficient and affordable, and it can contribute to a multimodal mobility strategy.

Regarding its demography, the district Rems-Murr is a densely populated region. With almost 500 Inhab./sqkm its density is more than double as high as in the federal average. The district has 31 cities or towns. Age-wise, almost two thirds of its population (58,6% in 2019) are older than 50.

Kernen im Remstal, the settlement which hosts this case study, is in legal terms actually not a “city”, but a Gemeinde, also a “Community”, i.e., an underdog-city but with autonomous government, the largest of this type in the valley. It has 15465 residents (2020). Its population density is 1028 inhab./sqkm. The municipal area contains besides important cultural heritage sites also 17 natural monuments. 21,1% of its territory is forest and 52,7% is used for farming and agriculture. 1,5% of its territory is explicitly leisure area.

The community has active groups in several activities, such as music, sports and arts. Kernen im Remstal is spatially distributed in two towns, now identified as neighbourhoods of Kernen, called Stetten and Rommelshausen, which were united for administrative reasons after the war, in order to simplify the urban management tasks. The sports club Spvgg Rommelshausen has 1800 members, distributed in several disciplines, the most attractive ones are football and athletics. The sports club Turnverein Stetten has a similar number of members. Both towns also have their own tennis clubs, with around 200 members each, according to their websites. Neighbours in Stetten state, that these numbers are exaggerated, and that the number of members is actually dropping. The Covid-19 pandemic contributed to this negative development.

The fact that both neighbourhoods have the same dedicated clubs makes it plausible to suggest uniting them into one, in order to save resources and avoid double work. This idea has been explored informally, but there is a natural reluctance on both sides to deal with the topic.

Society in the Rems valley is mixed, a combination between liberal and traditional families. There are large groups of migrants from all over the world, the largest ones from Italy, the former Soviet Union and Turkey. For a long time, before this cultural mix was established, the term “politics of the Rems valley” indicated policy making with provincial taste. But now it implies positive changes. (Brehmer & Moersch 2007).

2. Existing challenges in Germany and the region

Germany has one of the best health care systems in the world. But with 11,5% of the national budget, it is also one of the most expensive ones in the planet (Eurostat Online Data Codes hlth_sha11_hf, demo_gind, nama_10_gdp). In 2019, before the pandemic hit, expenses for public health care summed 410,8 billion € (federal statistic agency April 2021). 56,7% of this sum was covered by the statutory health insurance. If the numbers continue developing the way they do today, until 2025 the public health costs in Germany will reach 500 billion per year.

The lack of physical activity in Germany cost the social health care an estimated between 2 and 2,3 billion € per year. Diseases related to inactivity provoke about 65,000 deaths per year (as of 2012). A study at the sport university Cologne from 2017 found out that between 2014 and 2060, the combination of the aging population and the lack of physical activity will evolve in a progressive rise of health care costs. The statistic threshold between the active population (until an average age of 44) and the sedentary population (from



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65 inwards) means that because of the demographic change, the number of inactive people will grow, and the number of active people will drop more rapidly every year. (Dallmeyer et al. 2017).

The coalition of the federal government established 2021 as “Ampelkoalition” (known as traffic light coalition, because of the colours of each party), refers to the future of German community as in the process of becoming elderly and diverse. They state in the coalition contract “we want to transfer into a modern, multisector based agenda, learning lessons from the pandemic, which exposed how vulnerable is our current public health care system”. (Koalitionsvertrag, 2021)

A study about the first infection wave of the COVID-19 pandemic describes that the risk group for a severe course of the disease, made up by asthma-ill, heavily disabled, people with coronary sicknesses, and in general people older than 70, sum 36,5 million, including 21,6 million in the group of highest risk.

The WHO and the German research institute RKI (in Germany responsible for providing to the government scientific advice on infectious diseases) consider that people above 50 years of age are especially exposed to suffer a severe course of disease. This group builds up 51,3% of the national population older than 15 years. Additionally, there are risk groups in all age categories. (Rommel et al. 2021)

2.1 Underestimated chances to incorporate sports for the collective contribution of the community

Movement and physical company may be a key to tackle the demographic shift (Chekroud et al. 2018).

Investing in sport infrastructure can have a positive economic effect, as scientific studies confirm (Edwards and Agis 2008). Even though not all building projects automatically provide revenue (e.g., swimming pools), exercising, especially under professional guidance, guarantees positive effects for body and mind (Ekelund et al 2020) in all age groups (Chekroud et al. 2018). For that reason, time that is invested for exercising must be considered invested time, which also generates a “monetary value” like an asset. And the needed infrastructure is only a part of this capital.

In fact, studies have found out that even though most sport disciplines, practiced responsively, are healthy and beneficial, these positive effects increase in some types but are not as high in some others. A long-term study at Oxford university accompanied more than 80 thousand individuals for a period between 1994 and 2008. The participants were 30 years old or older at the beginning of the study and were separated in groups, depending on the type of exercise they would perform. The study concluded that the probability of sudden death (def.: sudden and unexpected death due to a heart related cause) would significantly drop if the individual was moderately active. Sport activities, where a racquet is involved (Badminton, Tennis and Squash), reduces the likelihood of sudden death by 47%, swimming by 28% and aerobic sports like dancing and gymnastics by 27%. (Oja et al. 2017)

The wish to increase inclusiveness through sports cannot be overlooked. The need and right to have an active life does not depend only on financial capabilities, it also requires time and spatial resources. Citizens need a share of each to have a chance to exercise and receive what the “traffic light” coalition has resolved as one of their goals: “affordable housing, fast internet, sustainable/ compatible mobility options and a health care that all everybody can benefit from”.

The German Olympic Alliance (DOSB) has appointed a commission to work towards inclusivity. Their strategic concept “Inclusion in and through Sports” (DOSB 2020) stresses that one of the transversal tasks of sports clubs and associations is to provide an arena for inclusion. And that they should collaborate in five areas: fitness programmes, structure, barrier free access, qualification and collaboration. The

community of sports clubs can work in alliances to support each other here. Everybody would benefit from Synergies.

3. The Appeal at the Core

The role of voluntary organisations and charities, especially the ones who support physical and mental activity, needs better attention and deserves more support. They shall be integrated more in the development of the municipal agencies. A dedicated programme between the government agencies and the clubs and associations shall be designed to strengthen this structure. It shall also be eventually expanded to other communities at regional and national levels.

3.1 Long term goals of the programme

- A better health and productivity of citizens in the valley of Rems that one can quantify;
- Activity, work and collaboration between all actors will make the community in the valley more peaceful, solidary and democratic;
- The improved social cohesion in the valley has a positive effect between all circles of society in their physical and psychic health, e.g., for people in vulnerable groups, such as people with disabilities or families with low income;
- The motivation pays back. Society receives and uses better conditions for a healthier lifestyle. They shall enjoy not only physical and emotional benefits, but also financial support.
- The positive side effects are tangible: people eat healthier, sleep better, are more productive and have generally a better mood.
- This model in Kernen turns into an export product, that makes the city an ecosystem for innovation, which is one of the goals of the coalition of the federal government.

3.2 Sustainable Development Goals

The sustainable development goals (SDGs) of the United Nations Agenda 2030 (Manandhar et al. 2018) benefit from programmes like this one. There is a direct connection to goal 3 “Good Health and Well-being”, which means guaranteeing a healthy living for all humans in all ages, promoting their welfare, and to goal 11 “Sustainable Cities and Communities”, which implies making settlements more inclusive, safer, more resilient and sustainable.

There are indirect connections to other goals. Goal 5 “Gender Equality” supports the empowerment of all women and girls to achieve self-decision always making and circumstances. Sport is gender neutral and inclusive. It also generates positive side effects, including a stronger self-esteem, which is especially important for young women.

Goal 12 “Responsible Consumption and Production” also would benefit indirectly. A healthy lifestyle can influence the consumption patterns of participants positively, in a way that local, sustainable and “healthier” goods and ways to produce them are supported.

The coalition in the German federal government uses the Agenda 2030 as a guiding path to create sustainable policies. Goal 16 “peace, justice and strong institutions” would benefit from policies that support mutual understanding, dialogue and peaceful cohabitation and democratic values. The federal coalition contract also states that through “civil participation, people strengthen people”. This is a delicate issue in our current reality in the region around the valley of Rems. In the last elections for federal and state parliament, the tendency of radical parties to maintain a solid core of supporters has been confirmed.

The assumption is that providing a chance to meeting, exchange and discussion, which is what clubs do, can contribute to reduce radicalisms.

Another tool to strengthen citizen participation is to improve the self-management of the institutions within the community, for instance to regional development workshops, in Germany known as REKs.

4. Proposals for Strategic Keys

The existing schemes at the city council for collaborating with neighbours can be extended with these ideas. There are well designed strategies by international and intergovernmental institutions, such as UN Habitat or the WHO.

It is obviously convenient to start with a self-evaluation. What are the current conditions?

Is Kernen strategically and spatially well designed? Can the infrastructure for sports and in general healthy social activities fulfil the needs of the population both in winter and summer seasons? Does the public infrastructure motivate people already today to a more active form of living? Is perhaps a more courageous financial investment necessary (soft- and hardware)? How often are the tasks revised? Is it advisable to redesign the current strategies of local government in this matter?

4.1 Recommendations by UN Habitat

On first of December 2021, UN Habitat started a world-wide campaign called “The city we need now”. The aim is to reach the goals of the Agenda 2030 more directly than the case until now has been. Many of the concrete areas for action are serviced by activities that clubs and charity organisations. Area one is dedicated to health and wellbeing. Other relevant ones are (4) inclusion and promoting gender equality, (5) economic chances for all, (6) culture and identity, (7) participatory municipal government, (8) city planning and design, (9) housing, public services and mobility, (10) education and innovation. (UN Habitat 2021).

4.2 Recommendations by WHO

The IPPPR (Independent Panel for Pandemic Preparedness and Response) at the World Health Organisation (WHO) proposed a strategy to make the Covid 19 pandemic “the last one”. The idea is to make sure that the governments can react quicker, more effectively and with better coordination. Recommended are eight intersectoral work groups in science, regulations, finances, data exchange and leading capacities. The starting point for preparations shall be at local and community level, and gradually be expanded. This should happen now, because we don’t know when the next pandemic will happen (Sirleaf / Clark 2021).

4.3 Recommendations by NCD Alliance

The NCD Alliance, which is a global network of organisations to prevent chronic, not transmissible diseases, issued a so-called “Global Agenda as answer to the current crisis and preparation to the threats of tomorrow”. It is supported by three pillars: Governance, Prevention and Health Systems. In total, twelve general recommendations are formulated. Four of them deal with obesity as core issue (NCD Alliance 2021).

4.4 Activity and Social interaction are an asset

The World Health Organisation recommends that everyone shall dedicate 20 minutes each day to moderate exercise, or 10 minutes to a more intense activity (Lee et al. 2017). Diverse scientific studies

demonstrate that this can bring substantial health benefits. Another study suggests that humans can increase their life expectation by up to 4,5 years (Moore et al. 2012).

Supposedly we could combine these keys into an integral strategy that incorporates physical activity, balanced nutrition and social assistance, which would effectively contribute to improve the lifestyle of our community and would result in dropping the costs of public healthcare (physical and psychic therapies) by 1%, the savings by the public healthcare insurance companies would be substantial. In Kernen (15465 inhabitants), considering the statistically calculated yearly expenses for healthcare of 5000 EUR per person, the public healthcare insurance companies would save 750 000 EUR every year with 1% cost reduction (avg.). Observed from a different perspective, if the public expenses for related activities and services (infrastructure, courses, assistance, therapies, equipment, workshops and similar) sum 1 million EUR, and they improve the lifestyle of 500 citizens of Kernen, with an effective saving in the costs for their healthcare services by 50% in a long term, that financing would achieve a return of investment ratio of less than a year. In economic terms actually a magnificent opportunity. In exchange, 500 citizens would be virtually co-investors.

The political agenda of the coalition of the federal government incorporates the goal of guaranteeing good living conditions in rural and urban areas. Public and semi-public institutions are considered here:

- To strengthen the social cohesion, investment- and revitalization programmes in the areas of sports and culture (i.e., sport facilities, swimming pools, libraries) will be simplified and increased.
- Every individual in Germany should count on high standards. This includes connected, daily, affordable and sustainable mobility (...) healthcare, education, culture and sports provision.
- We want to strategically interconnect metropolitan and rural regions for mutual benefit.

On sports, the agreement of the coalition of the federal government states:

- We are designing a development plan for sports with extensive collaboration, and we expand the movement towards investing in sport facilities in communes and clubs, which combine sustainability, barrier-free design and inclusion.
- Regarding support for sports, we consider the special needs for physical activity for the disabled. And we continue to reboot sports for the masses after corona.
- Goal driven guidelines: transparent, good governance and the professional development of specialists for high-performance sports.
- National vision Sports and Safety – sports as driver for violence: Clubs also can play a role in using sports as anti-aggression training.

The coalition supports the idea to incorporate the civil society, namely the educational factor of society and the inputs of actors outside school. The coalition wants to enable a comprehensive participation of specialists inside and outside the school system. The agreement includes mentoring, partnerships and support of highly skilled individuals, programmes for sports and activity.

4.5 Clubs and associations may also contribute to distress exhausted sectors in our society

Today in Germany we are suffering from a lack of elderly care personnel. The situation continues to worsen, and the gap may surpass 180 000 missing staff by the end of the decade. At the same time, the costs and numbers in patients in the sector will rise (Barmer 2021). The shortage of qualified workforce for children

day-care also will dramatically peak before 2030. Only in Baden Württemberg (the federal state where Kernen is located) will need 33 000 professionals (Bock-Famulla 2021).

In both sectors, a cooperation with sports clubs, namely with their qualified staff and with their members, can contribute to at least achieve a relief in the shortage of nursing and activity alternatives for children and the elderly. Multi generation gatherings, courses, elderly training, collaboration in activities with migrants, etc, can be offered. Other collaboration options are the use of club facilities, equipment, technical assistance, etc.

The improvement of the standards of provisions in urban and rural areas is also a topic of the coalition agenda of the federal government:

- Health services and elderly care must be future compatible, meet requirements and be spatially available.
- A trans-sectoral coverage shall be strengthened, also through more flexibility for regional models and binding options for co-development.

On the development of strategic, regional solutions, the coalition agreement states:

“We support initiatives to push sites in rural areas that combine basic provision of goods and services, culture, education and health care (centres for services, meeting points, city centres).”

Regarding elderly care (compatible initiatives), these points are included: “Participation, Engagement, ensuring social benefits, day to day services, housing, mobility, health care, services for education and activity, and overcoming loneliness”. Studies stress the importance of social contacts, which are more important than the physical activity itself, especially in older community groups (Phelps et al. 2008, Pitts et al. 2005, Ybarra et al. 2008).

5. Scenarios of a successful implementation

- Kernen becomes a model city of active citizens. Active neighbours, who meet the activity recommendations of the WHO (150 minutes per week), receive their club membership fees reimbursed by the programme. Active neighbours may also use facilities and take part in activity programmes of partner institutions.
- Sport flat rate allows each member of each participating club to use facilities and programmes of other participating clubs and initiatives
- Rewards from voluntary work. Volunteers, who collaborate at activities, initiatives, workshops, assistance, etc., receive an alternative form of gratification instead of a monetary compensation, such as services, credits, vouchers, discounts, etc.
- Sport clubs receive an additional financial support if they reach a certain level of engagement of their members, who achieve the WHO recommendations of weekly activity (150 minutes).
- Active Kernen becomes a branding for the city and is expanded to the rest of the Rems valley. Eventually it is exported to other cities in Germany and the world. Data that arises from the projects is used to measure the effects from a scientific viewpoint (sports medicine, social sciences, nutrition sciences, city and regional planning), it can also be fed into DATI, the recently created German Agency for Transfer and Innovation. The term “Politics of the Rems Valley” receives an additional signifying. In this regard, the coalition agreement of the coalition of the federal government foresees to expand the programme of smart cities into smart regions, turning it into a more flexible approach for city planning aspects.

6. Financing Mechanisms

The author suggests exploring external financing mechanisms for this initiative in Kernen. It is evidently difficult to realise a project of this kind only with funding of the local municipality. Certainly, it is realistic to distribute the load among many players:

- Sponsoring: Sport equipment industry, food supplements, local enterprises and companies with a large number of employees (opportunity to increase healthy standards in the organization)
- Funding programmes by the state, federal level and EU level on mass sport activities, healthcare, integration, inclusion, research
- Health care insurance companies
- The collective support by members and society with voluntary work would also be a remarkable capital.

7. References

Please use the "Harvard style" of references (in Mendeley - Harvard Reference style 1). Use approximately 20 to 60 references.

AMPELKOALITION Bundesregierung 2021-2025, Koalitionsvertrag zwischen der Sozialdemokratischen Partei Deutschlands (SPD), BÜNDNIS 90 / DIE GRÜNEN und den Freien Demokraten (FDP), online abgerufen 1.12.2021

BARMER Pfleregereport Online, visited 29.11.2021
<https://www.barmer.de/blob/360890/2ad4e5f56c47cb7b7e914190f9fae62f/data/dl-barmer-pfleregereport-2021.pdf>

BOCK-FAMULLA, Kathrin, et al. "Fachkräfte-Radar für KiTa und Grundschule 2021." Bertelsmann Stiftung (2021).

BREHMER, Jörg & MOERSCH, Karl: Remstalpolitik. Reinhold-Maier-Stiftung, Stuttgart 2007

CHEKROUD, Sammi R., et al. "Association between physical exercise and mental health in 1· 2 million individuals in the USA between 2011 and 2015: a cross-sectional study." *The Lancet Psychiatry* 5.9 (2018): 739-746. <[https://doi.org/10.1016/S2215-0366\(18\)30227-X](https://doi.org/10.1016/S2215-0366(18)30227-X)> visited Juni 15 2020

DALLMEYER S, Wicker P, Breuer C. How an aging society affects the economic costs of inactivity in Germany: empirical evidence and projections. *Eur Rev Aging Phys Act.* 2017 Oct 17;14:18. doi: 10.1186/s11556-017-0187-1. PMID: 29075352; PMCID: PMC5646132.

DOSB Deutscher Olympischer Sportbund „Strategiekonzept Inklusion im und durch Sport“ Frankfurt am Main: Deutscher Olympischer Sportbund (2020)

EDWARDS, Peggy, and Agis D. Tsouros. A healthy city is an active city: a physical activity planning guide. World Health Organization. Regional Office for Europe, 2008.

EKELUND, Ulf, et al. "Joint associations of accelerometer measured physical activity and sedentary time with all-cause mortality: a harmonised meta-analysis in more than 44 000 middle-aged and older individuals." *British journal of sports medicine* 54.24 (2020): 1499-1506.

KARAGIANNIDIS, Christian, et al. "Case characteristics, resource use, and outcomes of 10 021 patients with COVID-19 admitted to 920 German hospitals: an observational study." *The Lancet Respiratory Medicine* 8.9 (2020): 853-862.

LEE, Duck-chul, et al. "Running as a key lifestyle medicine for longevity." *Progress in cardiovascular diseases* 60.1 (2017): 45-55.

MANANDHAR, Mary, et al. "Gender, health and the 2030 agenda for sustainable development." *Bulletin of the World Health Organization* 96.9 (2018): 644.

MARCO POLO Reiseführer Remstal, MAIRDUMONT; 1st edition (5 Mar. 2019), ISBN-13 : 978-3829729512

MOORE, Steven C., et al. "Leisure time physical activity of moderate to vigorous intensity and mortality: a large pooled cohort analysis." *PLoS medicine* 9.11 (2012): e1001335.

NCDALLIANCE.ORG Online <https://ncdalliance.org/ncd-covid-19-recovery-agenda-report> visited 29.11.2021

OJA, Pekka, et al. "Associations of specific types of sports and exercise with all-cause and cardiovascular-disease mortality: a cohort study of 80 306 British adults." *British Journal of Sports Medicine* 51.10 (2017): 812-817.

PHELPS, Kristin A., et al. "An investigation of the effects of dog visits on depression, mood, and social interaction in elderly individuals living in a nursing home." *Behavioral Interventions: Theory & Practice in Residential & Community Based Clinical Programs* 23.3 (2008): 181-200.

PITTS, Margaret J., Janice L. Krieger, and Jon F. Nussbaum. "Finding the right place: Social interaction and life transitions among the elderly." *Health Communication in Practice*. Routledge, 2005. 233-242.

ROMMEL, Alexander, et al. "Bevölkerung mit einem erhöhten Risiko für schwere COVID-19-Verläufe in Deutschland. Auswertungen der Studie GEDA 2019/2020-EHIS." (2021)

SIRLEAF, Ellen Johnson, and CLARK, Helen. "Report of the Independent Panel for Pandemic Preparedness and Response: making COVID-19 the last pandemic." *The Lancet* (2021).

STATISTISCHES BUNDESAMT, Pressemitteilung Nr. 167 vom 6. April 2021

UN Habitat online document, visited 29.11.2021
<https://mirror.unhabitat.org/downloads/docs/The%20City%20We%20Need.pdf>

YBARRA, Oscar, et al. "Mental exercising through simple socializing: Social interaction promotes general cognitive functioning." *Personality and Social Psychology Bulletin* 34.2 (2008): 248-259.