

Becoming 'climate-smart' – lessons from Constance

By Thomas Menkhoff

DURING a recent study trip, I had the opportunity to visit Constance (German: Konstanz), a walkable and bicycle-friendly university city with some 83,000 residents located at the western end of Lake Constance in the south of Germany. With a length of 63 km and a width of nearly 14 km at its widest point, Lake Constance is the third largest freshwater lake by surface area in Central and Western Europe.

Despite differences in terms of population size, urban governance and economic strength, Constance and Singapore have many commonalities, such as their strategic interests in improving the lives of their citizens by becoming a "smart city" (or "smart nation", in the case of Singapore), and their focus and commitment towards smart urban technology adoption, climate protection, and nurturing startups.

Like Singapore (which came up tops in the 2021 IMD-SUTD Smart City Index ahead of Zurich and Oslo), Constance is making decisive strategic moves to create a digital and sustainable "city of tomorrow". In July 2021, Constance was selected together with 73 cities as a "smart city" model project by Germany's Federal Ministry of the Interior and Community. Strategic aspirations include more citizen-friendly eGovernment services, digital urban planning, climate-friendly mobility solutions, citizen participation, minimising the consumption of resources, support for voluntary work, enhanced quality of life, etc.

Core values such as digital sovereignty, digital participation and inclusion provide guidance for policymakers and citizens.

Due to its lakeside location, sensitivity towards environmental protection and nature conservation in Constance is high. The Wollmatinger Ried (a large reed area), for example, is one of the oldest nature reserves in Baden-Württemberg. Along with many other towns and communities on the lake, the city has invested millions of euros in water protection since the 1960s, when Lake Constance was heavily polluted due to inflows of untreated wastewater and the associated increase in the phosphorus content. The impending collapse of Lake Constance was averted through rigorous water protection measures coordinated across the entire catchment area. In 1959, Baden-Württemberg, Bavaria, Austria, and Switzerland (cantons of St Gallen and Thurgau) founded the International Water Protection Commission for Lake Constance, followed by legislation in the form of "The Convention on the Protection of Lake Constance from Pollution" in 1961. Subsequently, several sewage and wastewater treatment plants were constructed, which helped to drastically improve the lake's water quality.

In May 2019, Constance was the first German city to declare a "climate emergency" (along with cities such as Basel, Los Angeles, Vancouver, and London) in recognition of the potential acute danger to human life on planet Earth as a result of global warming. With an aim to become largely cli-

mate-neutral by 2035, a comprehensive climate protection strategy has been developed, encompassing the climate-neutral energy supply for new buildings, sustainable urban mobility management, measures to increase the renovation rate in the city area, etc. Citizens have also been invited to participate to make Constance "smarter" and greener.

The Constance climate donation fund

A special climate fund was implemented to bundle and expand existing funds for the financing of local climate protection projects, including 1) the municipal climate budget, 2) targeted support programmes (supported by the federal government or the state of Baden-Wuerttemberg), and 3) a new voluntary online donation fund in support of locally effective climate protection measures. This new "Constance climate donation"

(www.konstanzer-klimaspende.de) is linked to a CO2 calculator from KlimAktiv (<https://www.klimaktiv.de/de/269/>) and combines investments in climate protection with social action. Donations by citizens and other stakeholders are used for charitable purposes and projects. Beneficiaries include children (eg to support sustainable catering practices in schools), nursing homes and their residents (eg to offer a higher proportion of organic and regional products), cultural establishments such as clubs or theatres (eg to support the switch to electric vehicles or to install LED lights). Under the leadership of Lord Mayor Ulrich Burchardt and his

team, the city itself is also making compensatory contributions to the climate donation fund by offsetting CO2 emissions caused by the production of the city's official gazette or by official business trips.

Another hallmark of Constance is nurturing startups and their entrepreneurial ideas as exemplified by the so-called Kilometer1 Award, an inter-university ideas competition for undergraduate, postgraduate, and doctoral students enrolled at the universities in Constance. Through another programme named *farm – foundation & innovation*, startups and young technology entrepreneurs can receive support in the form of incubator services. TZK, the technology centre of Constance, helps startups and entrepreneurs to develop their businesses by providing information and consulting services, rental office space, networking opportunities and access to venture capital financing.

While Singapore is ahead of Constance in many of the conventional Smart City metrics such as usage of the city-state's digital identity app, coverage of electronic city services or wireless broadband, there are a couple of "smart" urbanism practices which I found worth emulating in Singapore. These include proactive stakeholder engagement with regard to smart city governance and ideation of smart(er) climate change mitigation efforts; designated bike streets ("highways") and cycling paths for cyclists; widespread use of cargo bikes and children trailers; the city's vast pedestrian precinct which makes walking delightful;

the thoughtful recycling of household waste with different bins for bio waste, paper, plastic/cans etc. The people are generally highly knowledgeable about what can or cannot be recycled, including being aware that mixing non-recyclable and recyclable waste is problematic.

As a coffee addict, I was humbled by the compulsory use of sustainable, reusable deposit cups at the University of Constance. Available in different sizes, these "RECUP reusable cups" are suitable for almost all types of drinks. Made of 100 per cent recyclable polypropylene (BPA-free), these to-go cups are dishwasher-safe, stackable, and therefore space-saving. One RECUP can replace up to 1,000 disposable cups. Customers pay a deposit of one euro – enjoy a drink on the go, then return the cup and get the euro deposit back. In addition to the deposit cup, deposit lids are available, too.

A trendsetting idea for Singapore is perhaps also the composting of biodegradable trash such as fruit and vegetable waste as well as food leftovers which are collected separately by households in bio-bins, and then used as organic fertilizer. It complements Germany's deposit and return system for non-refillable beverage containers, a core element towards a truly zero-waste country where all discarded materials are resources for others to use.

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