



WHY SPATIAL PLANNING?

The first working title for this exhibition was: *Why Spatial Planning? Indeed, why? Because spatial planning can contribute a great deal towards making Switzerland a beautiful place, a successful place and a place worth living in.*

What can planning really do? Spatial planning can keep landscapes intact. It can protect towns and countryside from sprawl. It can keep transport systems functioning, as well as improve them, enabling shorter trips, preventing traffic jams, thus saving energy and time. It can also steer the development of settlements in locations that are

already well connected and, as a result, keep down the cost of road construction, power supply lines, and water and sewage pipelines. Spatial planning can create the framework that allows private land-owners and public authorities to build attractive and lively settlements. It can lead to cooperation between communities, cantons and across international boundaries, which benefits the public. Moreover, spatial planning can help protect us from natural hazards. *Is it then fitting to ask a little skeptically «why»? We will show that spatial planning can do all this and therefore we say **Yes to Spatial Planning!***

1 SPATIAL PLANNING PROTECTS THE LANDSCAPE

Spatial planning devises the rules of the game that govern the design of living space. In order to implement these, planning needs effective tools, for example, the possibility to reduce or limit residential areas and even transfer building zones from one location to another. The landscape should be kept free of any construction.

Completely undeveloped areas are rare in Central Switzerland. A lot of open countryside has been built upon. Taking advantage of the landscape is not just about enjoying the view and relaxing outdoors. Our landscape is also a prerequisite for food production. It is a living space for animals and plants. It ensures we have clean water and fresh air. We need open landscape to live.

The classification of building zones and non-building zones is one of the fundamental principles of spatial planning in Switzerland. Many communities want to extend their building zones, despite the fact that one quarter of existing building zones in Switzerland are yet to be developed. Some of these building lots are not available because the owners do not want to sell, while other lots are available but are in areas where there is a lack of demand. Furthermore, there are built-up areas that still have capacity for

new development in terms of living and working space. At present, Switzerland does not need new building zones; in actual fact, the current building zone portfolio is in need of reorganization and efficient utilization.

The goal of spatial planning is to protect the landscape and further develop existing settlements through good design and improved functionality in order to provide us, and future generations, with the best possible quality of life. We are not trying to build a new Switzerland; rather we are redesigning the country's existing settlements. Hence, spatial planning turns sprawl into settlements.

15–25% of the reserve land in building zones outside largely built-up areas in the Cantons of Basel-Land, Schwyz and St. Gallen are blocked because the owners are not interested in building on or selling their land. 7,000 new apartments were built outside a building zone in Switzerland between 2001 and 2010.

2 SPATIAL PLANNING SAVES RESOURCES

The goal of spatial planning is to steer building growth in today's existing cities and agglomerations in order to save on land, energy and infrastructure costs.

Land is a very valuable resource; it is not only in short supply, it cannot be increased. In spite of this, we have built

upon so much land in recent decades that it would seem we have an unlimited supply. The more wasteful we are with our land, the more spread out our settlements are, the more streets, drainage systems and water pipelines we need – and the higher the cost of such extensive infrastructure. Any additional major development of the transport network is simply unaffordable. It is vital that our resources, that is to say land, public financing, energy and raw materials, are allocated efficiently and sustainably.

The development of settlements and the construction of relevant infrastructure should be closely coordinated. There is a need for compact developments, located in well-connected areas with multi-storey buildings that are not scattered across large plots. The expansion of high-density settlements can be achieved through infill development, densification of inefficiently used plots, closing gap sites and the adaptation and conversion of industrial brownfields. Further development of rural conglomerations for commuter communities should be avoided in the future, as these represent high levels of land consumption, additional traffic, and extensive and expensive infrastructure. We need building zones in the right areas, which means locations that are well connected via public transport.

135 m² average building zone area required per person in the city, 482 m² per person in rural communities. 20 billion francs are needed every year in order to maintain and renew existing technical infrastructure (transport network, provision and disposal of public utilities, protective structures). This amount corresponds to the cost of the north-south railway link, Alp Transit, a 57 km long tunnel through the Alps. One new tunnel every year!



3 SPATIAL PLANNING REDUCES TRAFFIC CONGESTION

Spatial planning provides for more compact settlements in which the distances to schools, shops, recreational areas and workplaces are short. The densification of settlements close to public transport stops or stations means that spatial planning also reduces car traffic.

In the last few decades, we have predominately built a settlement structure that has forced us to travel more often and further away – mostly by car. For example, we have to drive to the shopping centre because most of the local shops have disappeared. This has resulted in higher traffic volume, more commuters, more traffic jams, ugly parking lots and larger surface area use. The goal of spatial planning is to allow for settlements that are sufficiently populated in order to provide local shops with enough customers. Other amenities, such as cinemas, sports facilities and, not least, workplaces should be within walking distance or accessible by bicycle or via public transport.

The future of planning lies in compact settlements because they shorten the distances that have to be covered. In order to ensure the efficient utilization and affordability of public transport, more people have to live and work close to train stations and bus stops. And this is the only way to limit the continuing increase of car traffic with its negative effects, such as noise pollution, air pollution due to exhaust fumes and increased energy usage. The growing population and increasing job opportunities have to be directed towards existing settlements and locations that are well connected via public transport.

162 shopping centres existed in Switzerland in 2011, most of which were located outside of settlements. More than 30 are currently in the planning stage.

62% of shopping trips require a car if there are no shops within a radius of 300 metres of the home; however, this figure drops to 20% if shops are available within a 300 metre radius.

4 SPATIAL PLANNING SAFEGUARDS AGAINST NATURAL HAZARDS

Spatial planning prevents damage caused by natural catastrophes by indicating where it is safe to build and where, for safety reasons, building should not be allowed. Spatial planning protects human lives, buildings and infrastructure.

Flooding, mudflows, rock slides and avalanches were the catalyst that led to forests and woodlands in Switzerland being awarded legal protection in 1876. Today, the forests still make an important contribution in protecting settlements and infrastructure from destruction. Protective structures, such as avalanche defense barriers, flood control dams and rockslide nets, have received considerable invest-

ment for generations. However, even the best protective structures cannot guarantee absolute security.

Spatial planning protects against natural hazards in that it guides settlement development in such a way that new buildings and systems cannot be built in danger zones. The cantons use natural hazard maps to indicate where the threat from natural catastrophes is high. Restrictions in land use are put in place for these areas to the point of construction bans. Spatial planning therefore ensures that building is only permitted in safe locations. As a result, the number of buildings at risk is reduced in the long term. Furthermore, spatial planning has made more space available for rivers and streams, thus leading to the formation of reservoirs, which act as storage basins for floodwater. Such measures are becoming more important, as we experience increased and more severe flooding due to climate change. Moreover, for decades now spatial planning has ensured that construction and land use does not jeopardize water conservation or drinking water supplies.

6 people lost their lives in the 2005 floods, which also resulted in damages totalling 3 billion francs.

500 km of permanent and 150 km of temporary avalanche barriers protect settled areas and transport routes in Switzerland.

5 SPATIAL PLANNING CREATES QUALITY OF LIFE

The task of spatial planning is to ensure that everyone is afforded a suitable living space. This can only happen if both public authorities and private construction companies assume mutual responsibility for the residential environment and maintain a philosophy of building as a whole.

Good livability offers affordable, light and well-equipped apartments. However, the surroundings are also crucial. Most of us want a neighbourhood with low levels of noise and traffic, a lot of green spaces, and public areas where we can meet other people. We value a local area whose design enables us to quickly and safely travel to work, school and the shops, and return home after an evening visit to the movies.

Livable settlements can only arise when all three areas – the building itself, transport connections and design of surrounding spaces – are adapted to our needs. In order to create livable settlements, we also need private landowners and real estate developers to take on responsibility for the design of open spaces, that is to say roads, plazas and green areas, and think beyond their development's borders.

The establishment of building zones and construction of infrastructure means private landowners benefit more and make profit. But it is the public authorities that spend a great deal of money on efficient design of the road network and plazas, as well as appealing connections to public transport. Therefore, fairness demands that in future not only private investors should profit, while the public pays. A part of the land value gain resulting from public planning should be used for the design of city districts and to compensate for losses due to rezoning.

26% of the population will be over 65 years old by 2035. Older people need neighbourhoods with quiet recreational areas, shops within walking distance and also the opportunity to meet with younger generations.

15% of today's population is under 15 years old. Public recreational spaces are important for children's quality of

life, as they offer the chance to play, move and communicate with other youngsters.

6 SPATIAL PLANNING NAVIGATES ACROSS BORDERS

The aim of spatial planning is to persuade cantons and communities to work together in developing common living spaces. Borders should not limit the planning of settlements and landscape!

More and more often, we pursue various activities in different communities every day. We commute to work in a different city, drive to the shopping centre in a neighbouring community or spend our free time across the border in another canton. Increasingly, the settlement areas of neighbouring communities are merging. The result of such changes places serious demands on all those who influence the organization of our living spaces.

Many tasks are, and remain, the responsibility of the individual cantons and communities. However, today more challenges could be successfully overcome if there were closer cooperation across community, cantonal and national borders. Cross-border planning enables us to find solutions in the design of living space, for example, to manage transportation issues or to link and upgrade recreational areas. No single authority would be able to find such solutions without help from another. The task of spatial planning is to coordinate regionally significant activities across national, cantonal and community borders.

Finding solutions across political boundaries and beyond promotes mutual understanding and allows us to take advantage of shared opportunities and protect our common interests. Spatial planning leads to solidarity.

75% of the population of Switzerland lives in "urban areas". These are made up of 50 agglomerations with a total of around 1,000 communities as well as five large cities. 2,495 communities existed in Switzerland at the beginning of 2012. In 1990, there were 3,021.

7 SPATIAL PLANNING CONCERNS ALL OF US!

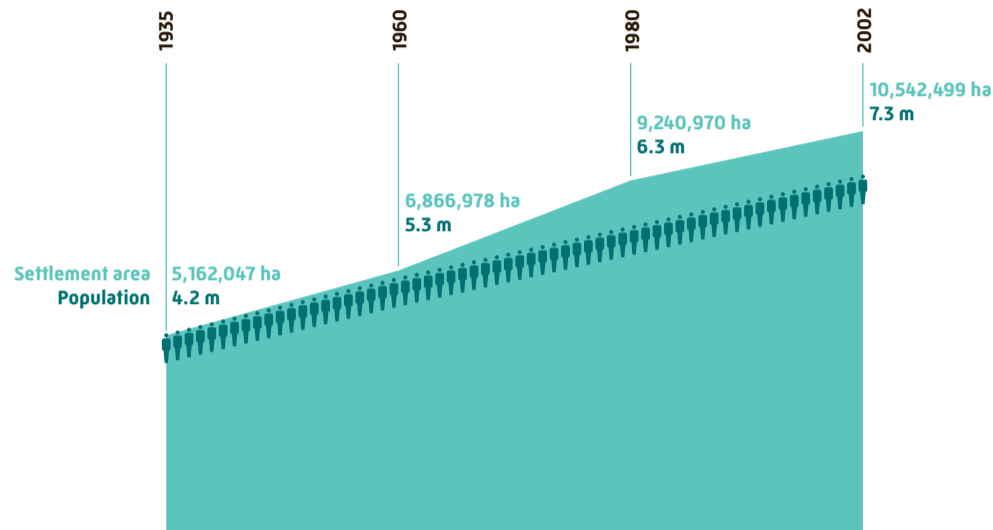
Our behaviour affects the space around us. We decide where we live, how we travel and where we spend our free time. This impacts on space. Spatial planning is entirely in our hands. Spatial planning is democratic. Spatial planning allows everyone to participate.

We live, work, shop and go to the movies. We drive to the mountains and fly to the ocean. As a result, each one of us exerts influence on the space around us on a daily basis, we use infrastructure, make demands on certain areas – and thus determine the appearance of our living space. We are all actors within the space. Our demands on the land are constantly on the rise.

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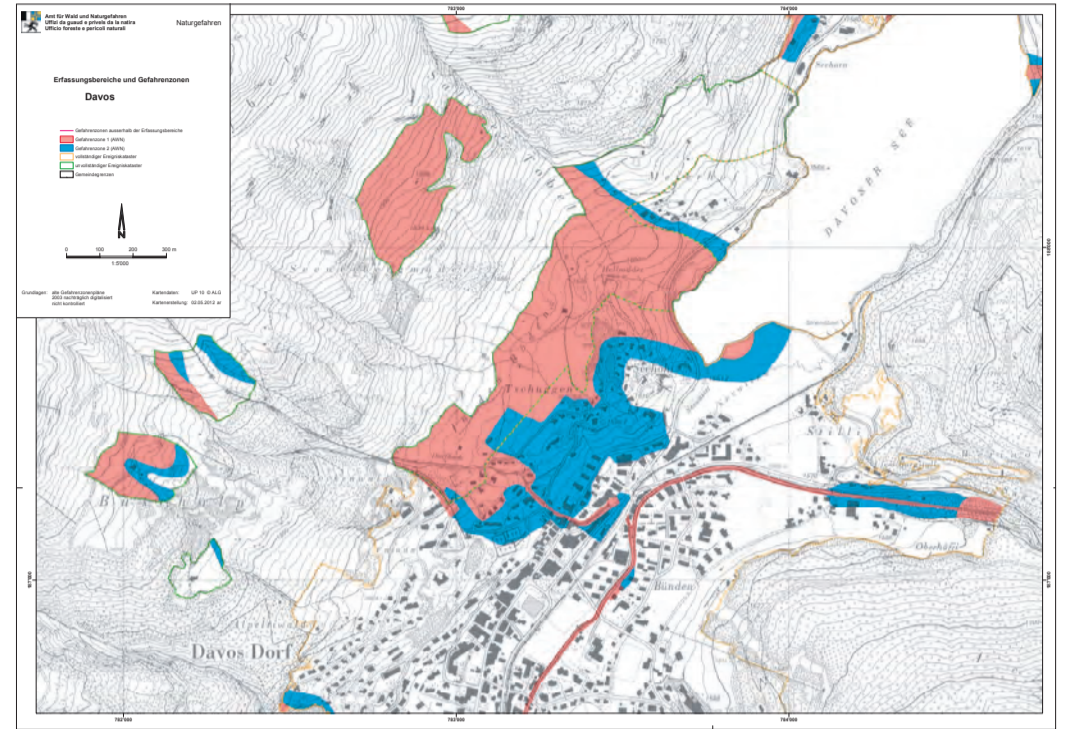
1

Growth of settlement area and population



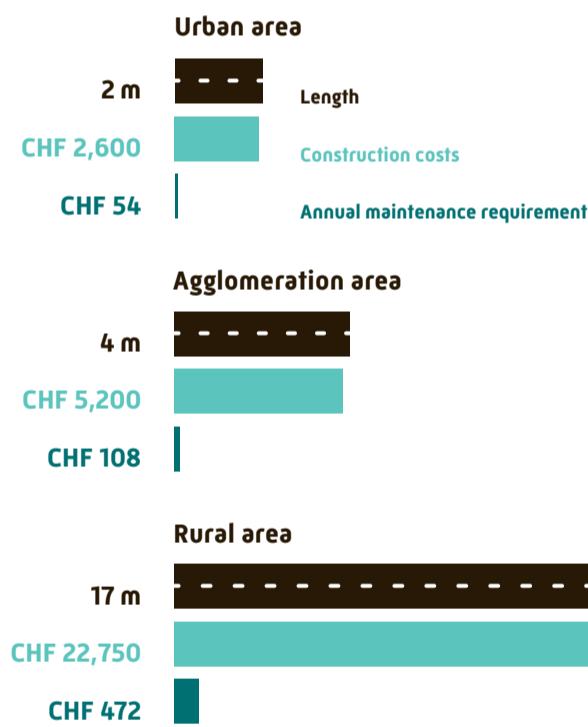
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Hazard Map, Davos



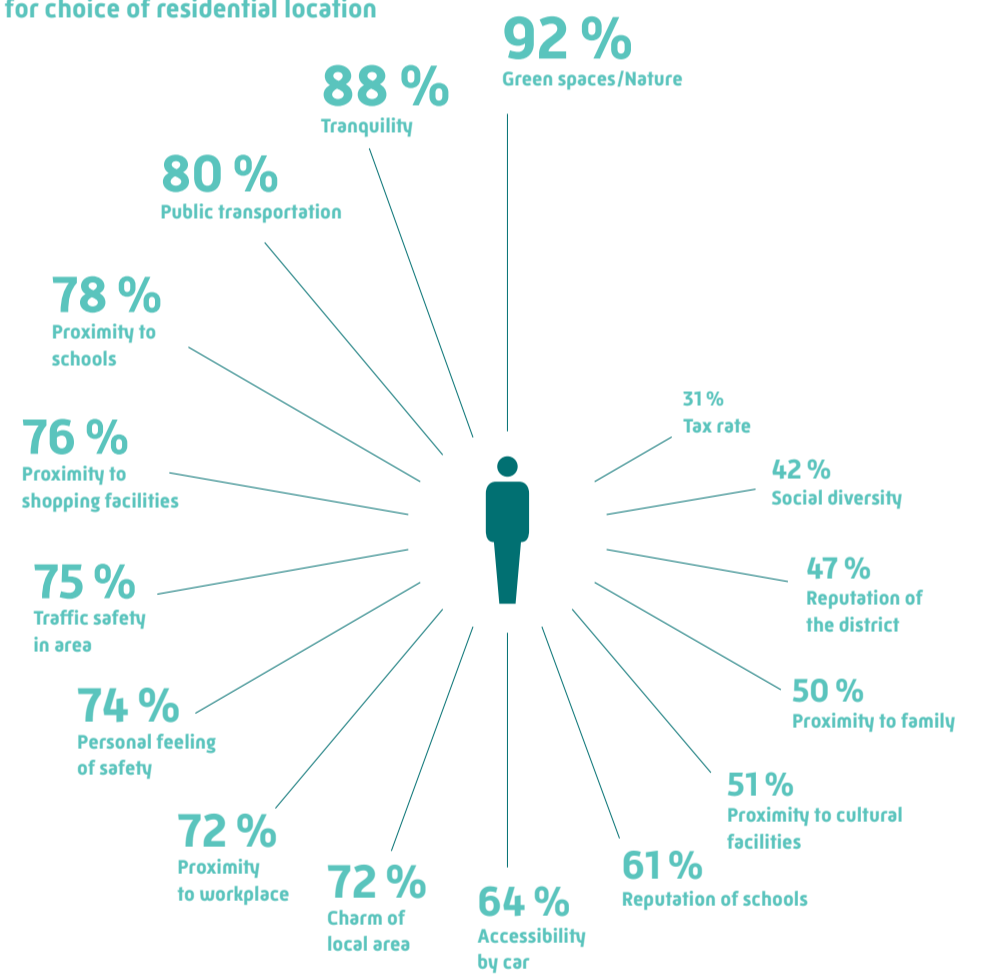
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Average street length required per inhabitant



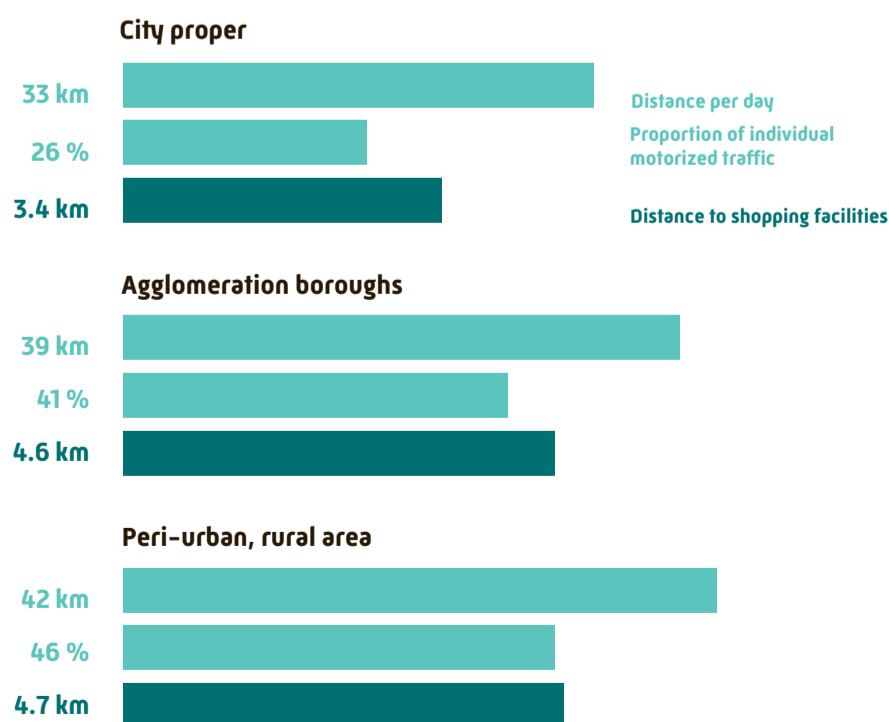
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Criteria for choice of residential location



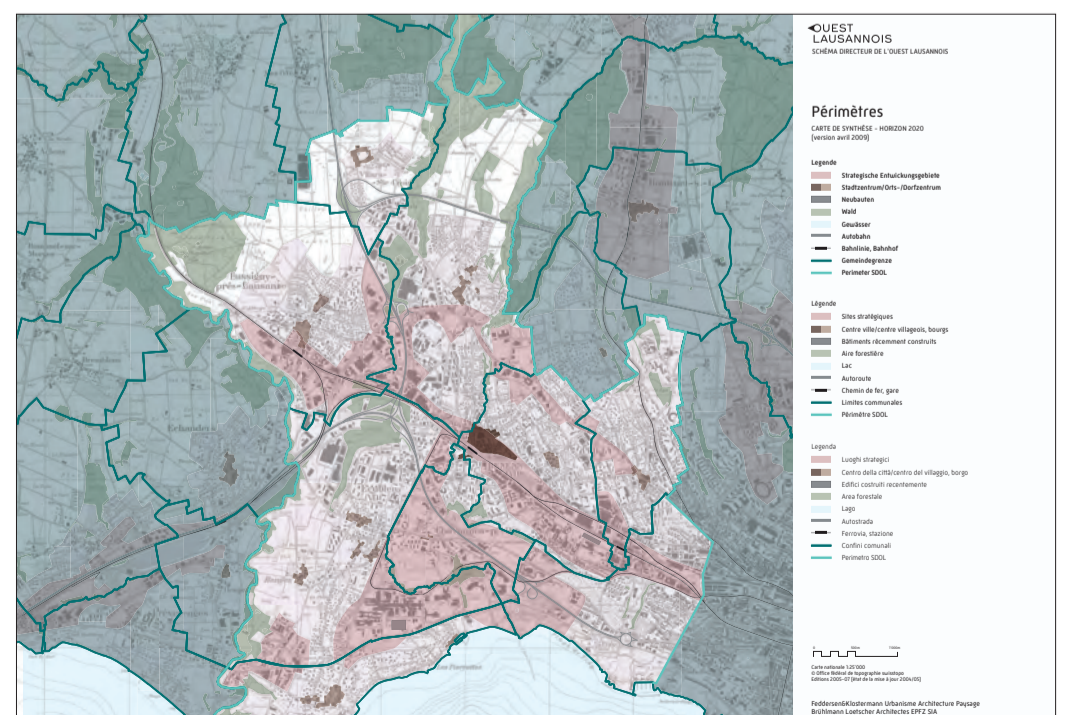
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Transport patterns by residential location



6

Lausanne West: Cross-Border Plans

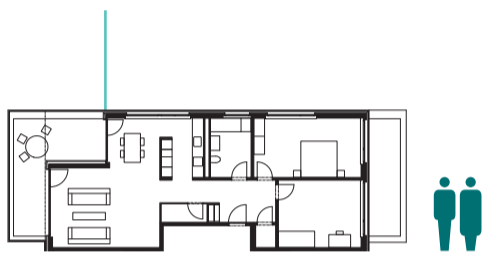


7 EFFECTIVE SPATIAL PLANNING NEEDS EFFECTIVE TOOLS

Apartment for a family of four, 1929
63 m²



Apartment for two persons, 2010
102 m²



Through spatial planning, the state, canton and community draw up the rules of the game that influence the design of our living space.

It is a question of forward-looking coordination of spatially effective practices; that is to say, differing uses of and demands on space have to be adapted to one another in order to avoid conflict. The rules apply to both public authorities and private landowners for the protection and welfare of everyone. Our living space is a public commodity.

Thanks to Switzerland's direct democracy, voters can have a say in the decisions made regarding the rules and design of our living space. Spatial planning is democratic and allows everyone to participate; the authorities responsible for planning inform the population about planning projects and therefore ensure that the public is able to contribute to the process. This serves to clarify related concerns and needs. Collaborative methods apply to all those affected by a particular plan, not just those entitled to vote.

86 % of all journeys relating to shopping or leisure activities are made by car.

80 % more primary energy is used in peripheral settlements with poor public transport connections compared to centrally located settlements with good public transport connections.

The progressive loss of open landscape to sprawl must be curbed. Spatial planning can only fulfill its legal mandate of economical land policy if it is equipped with the appropriate tools. The following topics are currently under political discussion:

Building zone restrictions Since 1980, spatial planning has been obliged to separate building zones from non-building zones according to spatial planning law. However, despite regulations, building zones in Switzerland have been continuously expanded over the past three decades. New legislation should be put into place, which permits new zoning only under increasingly specific conditions and reduces the amount of oversized and oversized building zones.

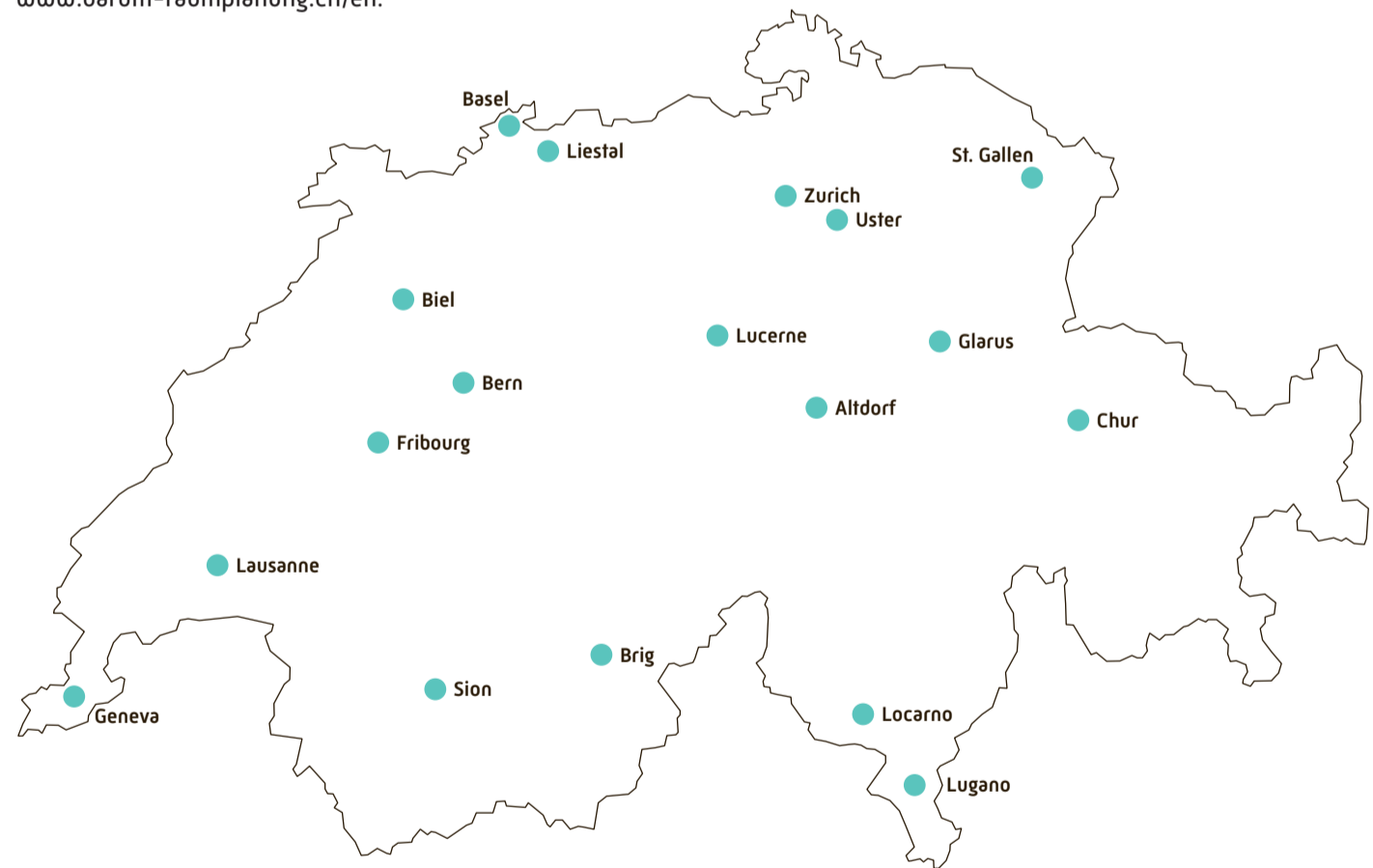
Land management There is sufficient building zone area available in Switzerland; nevertheless, many communities want more. Many undeveloped building zones are located in areas where there is a lack of demand or inadequate public transport links. In contrast, many well-developed,

construction-ready building lots are not available as the owners refuse to sell. In such cases there should be some form of intervention using land management tools: building obligations to prevent hoarding of building plots, more compact developments for improved utilization of building zones, transfer of building zones to avoid further land consumption (i.e. rezoning into farmland as compensation for new zoning of building land).

Additional land value levy Through planning (zoning and rezoning) and the building of infrastructure (railroads, streets, utility installations, water, electricity etc.) public authorities create additional value for individual landowners without the owners having to contribute. Therefore, at least a partial levy on this added land value is necessary. This income gives public authorities the chance to offer compensation for decreased land value in the case of rezoning, maintain and expand public infrastructure, as well as create and improve open spaces for the general public.

EXHIBITION LOCATIONS IN 2012

Current road map available at:
www.darum-raumplanung.ch/en.



IMPRESSUM

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PHOTOGRAPHIC SOURCES

1 Jaeger, Schwick, Bertiller & Kienast: Landschaftszersiedelung Schweiz. NFP 54. Zurich 2008.
2 Schalcher et al.: Was kostet das Bauwerk Schweiz in Zukunft und wer bezahlt dafür? NFP 54. Zurich 2011. Ecoplan: Siedlungsentwicklung und Infrastrukturkosten. Bern 2000.

3 BFS/OFS/UST: Mobilität in der Schweiz. Ergebnisse des Mikrozensus 2005 zum Verkehrsverhalten. Neuchâtel 2007. T 7.3.
4 Erfassungsbereiche und Gefahrenzonen Davos, Amt für Wald und Naturgefahren Kanton Graubünden, 2012.

5 Pattaroni, Thomas & Kaufmann: Habitat urbain durable pour les familles. PNR 54. Lausanne 2009. Fig. 5.
6 SODL
7 Röntgenhof, Zurich, 1929. Siedlung Frohheim, Zurich 2012 (EM2N/Müller Sigrist).

