

ETH zürich

Real Estate Strategy

Vision and strategic principles



Title page:

Its excellent infrastructure for teaching, research and knowledge and technology transfer is a key factor in the success of ETH Zurich (example: laboratory for digital construction in the Arch_Tec_Lab, Hönggerberg Campus).

Page	Image credit
1 (Cover image)	Gramazio Kohler Architects
4	Gian Marco Castelberg
6/7 above	Fabian Schneider
6/7 below	Andreas Schlumpf
8	Alessandro Della Bella
10	Gian Marco Castelberg
14	Gian Marco Castelberg
16/1	Lina Meisen
16/2	Gian Marco Castelberg
16/3	Alessandro Della Bella
19/1	Gian Marco Castelberg
19/2	Alessandro Della Bella
19/3	Gian Marco Castelberg
20/21	Gian Marco Castelberg
22	Scanderbeg Sauer
24	Scanderbeg Sauer
26	Gramazio Kohler Research
28/1	Alessandro Della Bella
28/2	Alessandro Della Bella
30	Nickl & Partner Architekten AG
31	David Küenzi
33	EM2N
35/1	Gian Marco Castelberg
35/2	Lex Schaul / Katja Schubert
36	focusTerra / Radek Brunecký
37	Stücheli Architekten AG
38	Gian Marco Castelberg

Published by ETH Zurich, Real Estate Management Department
 Design Viva AG für Kommunikation, 8048 Zürich
 Edition 200

© ETH Zurich, March 2020

Contents

Foreword	5
1. Framework	6
1.1 Aim and purpose	6
1.2 Fundamentals	7
1.3 Integration ETH strategy process	8
1.4 Tasks, roles and responsibilities of the Real Estate Management	10
1.5 ETH Zurich's real estate portfolio	12
2. Vision	20
3. Mission	22
4. Strategic principles	24
5. Derived sub-strategies	38

The prestigious main building in the city centre is the landmark of ETH Zurich.



Foreword

ETH Zurich is one of the world's leading technical and scientific universities. It is characterised by excellent teaching, pioneering basic research and the direct transfer of new scientific findings into practice. The outstanding infrastructure for teaching, research and knowledge and technology transfer (KTT) is a key success factor of ETH Zurich. It helps attract both highly qualified personnel and exceptionally motivated, talented students, and enables them to fully develop their academic creativity. Reacting to educational developments at an early stage is one of the major challenges of strategic real estate planning.

The real estate strategy supports trendsetting and consistent decisions, as well as facilitating agile real estate management. Prudent site allocation at ETH Zurich promotes the cross-departmental and interdisciplinary exchange of its students and staff. New building and renovation work must proceed effectively in order to ensure that rooms are available in time and in accordance with requirements. At the same time, existing architectural structures have to be adequately preserved. Space allocation should be based on uniform criteria and ensure a high occupancy rate.

High quality and sustainability are benchmarks at ETH Zurich both in general as well as in regard to natural resources, its extensive real estate portfolio and the available financial resources.

1. Framework

1.1

Aim and purpose

The real estate strategy defines the binding scope of action and development goals for all those involved in real estate management. The strategy for real estate portfolio management, project management and real estate management should be outlined in a transparent way. This will allow the Real Estate Management and Facility Management to align their cooperation with the departments and the other sections of the Executive Board, as well as with the ETH Board proper and the responsible federal authorities, and work towards the creation of a clear strategy.

The Real Estate Management at ETH Zurich is subject to the conflicting demands of the federal government, the authorities and the ETH Board on the one hand, and the requirements of academic development and ETH Zurich users on the other. The real estate strategy responds to these conflicting priorities with ten strategic principles, and dispenses with an approach of general prioritisation which could never apply equally to the entire task spectrum. The real estate strategy is conceived for the long term – longer than the overall spatial and financial concept (RFGK), which was allocated a twelve-year time span – and is updated every four years in line with academic planning. Thematic sub-strategies serve to implement the strategy.

Researchers at ETH Zurich have access to an excellent and flexible infrastructure. Here, this is illustrated by the Laboratory of Hydraulics, Hydrology and Glaciology (VAW), located on the Honggerberg campus.



ETH Zurich is focusing increasingly on multifunctional premises in the context of teaching.

1.2

Fundamentals

The ETH Board is the authorised Federal Construction and Properties Service (BLO - Bau- und Liegenschaftsorgan) designated by the Federal Council for the ETH Domain, which equates to the Federal Office for Buildings and Logistics for civil buildings¹. In this function, it is responsible for the fulfilment of the strategic objectives of the federal government's real estate management and the principles of task fulfilment. In addition, the ETH Board coordinates the management of real estate and ensures that it maintains its value and functions. It delegates the majority of its tasks to the institutions responsible for the operational implementation of real estate management, and defines the corresponding responsibilities and the management model².

For the purposes of strategic control and the exercise of its supervisory duties, the ETH Board has defined the tasks, responsibilities and associated management tools in the "Directive on Real Estate Management in the ETH Domain" dated 1 January 2016. The ETH Board defined the importance of real estate for the ETH Domain, the guiding principles for real estate management and the strategic objectives in its real estate strategy/policy dated 5 September 2011.

These are based on the federal guidelines for real estate management:

- Concentration of the accommodation of the organisational units in polyvalent properties of appropriate size, which are owned by the federal government insofar as this is economically viable.
- Creation of and compliance with sustainable standards in all areas of real estate management.

¹ Federal Ordinance on Real Estate Management and Logistics (VILB) of 5.12.2008

² Directive on Real Estate Management in the Domain of the Swiss Federal Institutes of Technology of 1 January 2016





The infrastructure of ETH Zurich is also used as a "real-time laboratory" charting the latest developments in research. The adaptive solar façade of the House of Natural Resources, illustrated here, is just one example.

1.3 Integration within the ETH strategy process

Figure 1 demonstrates the way in which the real estate strategy is integrated within the ETH Domain's strategy processes. The left column shows the integration within the academic strategy processes pursued by the Swiss Federal Council and the ETH Board. The right column shows the strategic guidelines issued by the federal government and the ETH Board in the area of sustainability.

At ETH Zurich level, the real estate strategy is oriented to the strategy and development plan for the respective performance period, and aligned to the implementation of the ETH Zurich energy mission statement and sustainability guidelines. As far as the overall spatial and financial concept is concerned, ETH Zurich provides information every four years alongside its twelve-year development plan in the form of a strategic action plan, which addresses the following:

- the need for real estate and its coverage,
- the buildings' desired condition,
- the required investment,
- the financial viability of meeting demands and preserving the buildings' condition, including operation, maintenance, extension and dismantling.

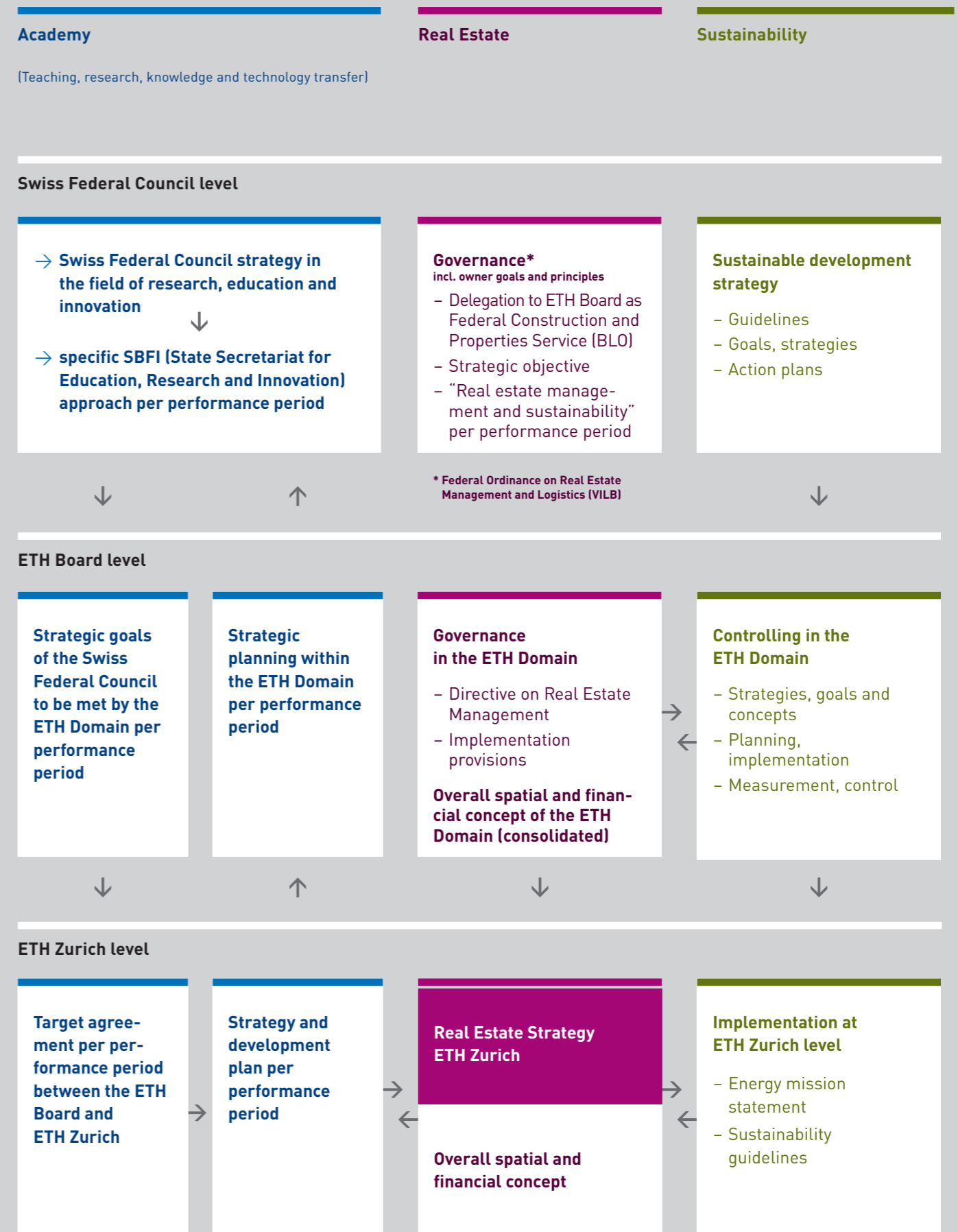


Figure 1: ETH strategy processes

1.4

Tasks, roles and responsibilities of the Real Estate Management department

1.4.1

Roles and responsibilities

Integrated real estate management at ETH Zurich falls within the remit of the Real Estate Management department (portfolio management, strategic planning, project development, project management for planning and execution) and the Facility Management department (technical and infrastructural facility management). Both departments report directly to the Vice President for Infrastructure of ETH Zurich (VPIN).

The Real Estate Management department is responsible for the timely provision of the necessary building and workplace infrastructure. It is thus responsible for implementing the real estate strategy. In the process, it performs both strategic and operational tasks, coordinates the stakeholder groups (researchers, facility management, other departments at ETH Zurich) and acts as the owner representative.

The Facility Management department is responsible for building management in the areas of technology and infrastructure. It coordinates the services required for the daily operation of the buildings. Responsible for facility management during the planning and construction phases, it maintains close links with the construction processes of the Real Estate Management department.

The departments and other sections of the Executive Board with their respective staff units and administrative divisions support the Real Estate Management department in its eponymous duties in their function as user representatives in construction projects, and by coordinating user needs internally. They are responsible for the operational implementation of space administration within the department in accordance with the responsibilities assigned to the department.



Workstations for students are offered in many ETH Zurich buildings across all campuses. They are used for concentrated work as well as for informal exchange between students.

1.4.2

Real estate strategy

The Portfolio Management division, affiliated to the Real Estate Management department at ETH Zurich, develops the real estate strategy and coordinates the supplementary documents and sub-strategies mentioned therein. ETH Zurich's real estate strategy is officially established by an Executive Board decision. The real estate strategy is developed, implemented and monitored in compliance with the following responsibilities in accordance with the ETH Zurich organisation ordinance.

The real estate strategy is reviewed at least every four years and updated as necessary. The Portfolio Management division is responsible for lead management. Fundamental changes to the real estate strategy are submitted to the Executive Board for decision. Periodic updating ensures that the real estate strategy is continuously aligned to the ETH strategy and reflected in the medium-term financial planning of ETH Zurich.

1.4.3

Tasks of the Real Estate Management department

Strategic tasks:

- Development of the real estate strategy and related sub-strategies
- Creation of development scenarios for the entire portfolio
- Preparation of master and area plans
- Preparation of demand and space planning
- Preparation of superordinate concept studies
- Supervision/facilitation of scientific concepts
- Updating the investment plan
- Creation of overarching guidelines and standards

Operational tasks:

- Recording and documenting the condition of existing buildings
- Checking and implementing the spatial needs and requests of the various stakeholders
- Development, planning and realisation of new buildings, conversions and repairs
- Implementation of user-initiated works contracts
- Procurement of planning services (architects, engineers and specialists) and contractor services for construction projects through project competitions and/or tenders
- Processing of real estate transactions
- Management of rental, lease and building rights agreements
- Representation of the owner's interests vis-à-vis third parties (authorities, companies, private individuals)
- Planning of interior design, furniture management
- Planning and carrying out removals
- Preparing reports for internal and external stakeholders

1.5 ETH Zurich's real estate portfolio

Sites

ETH Zurich is based chiefly in Zurich, where it operates one campus in the Höggerberg district and another in the city centre. The main site is complemented by strategically selected "other sites" in the Canton of Zurich, in Switzerland and in Singapore.

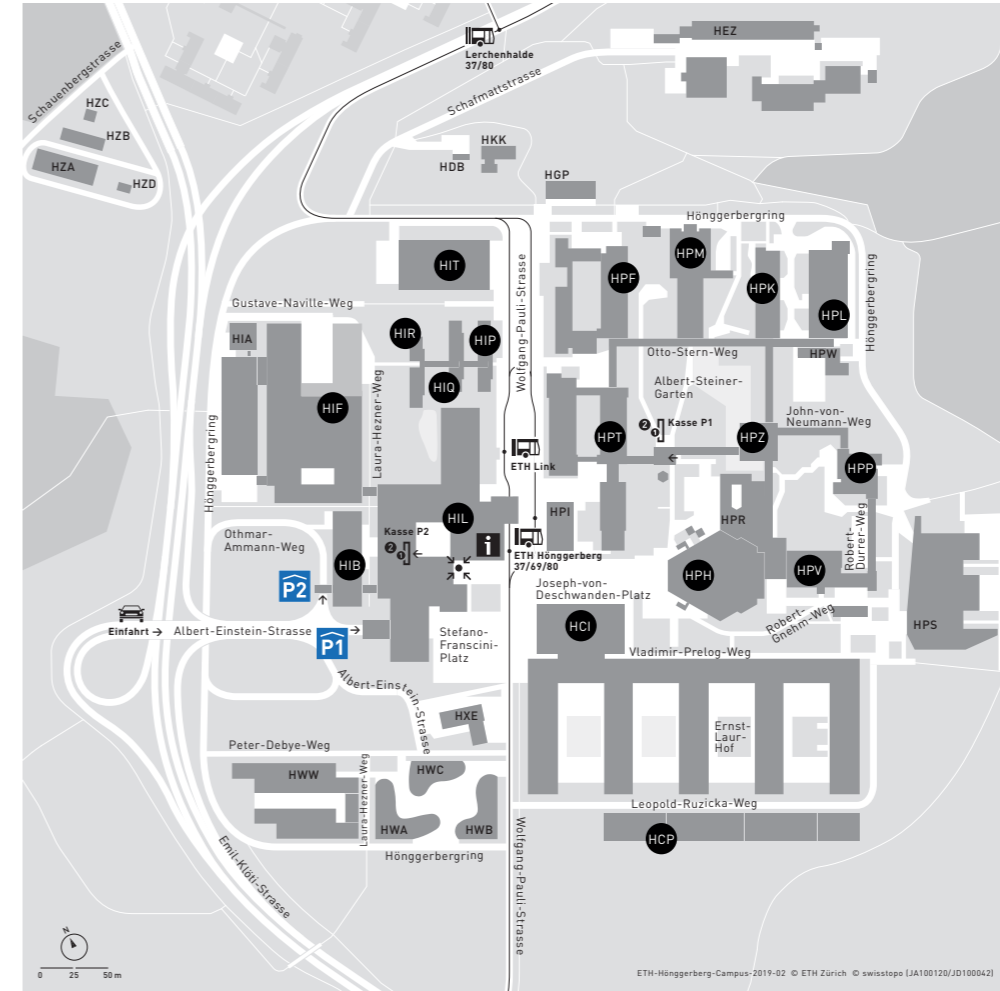


Inventory data

	Total	Zentrum campus	Höggerberg campus	Other sites
Number of buildings	190	91	49	50
MUA (m ²)	479 050	215 226	215 242	48 582
Indexed reinstatement value (in million CHF)	4686	2222	2187	277
Reinstatement value (%)	100	47.4	46.7	5.9

Overview of portfolio values (last updated 31.12.2018)

Zurich main site Höggerberg campus



Zurich main site Zentrum campus



Architectural heritage conservation

The protection of historical buildings, monuments and local architectural heritage is a key priority at ETH Zurich. The historical buildings of ETH Zurich are preserved as cultural witnesses of a rich architectural tradition, and documented, researched and professionally maintained. They are being upgraded and rebuilt to meet the high demands and cope with the rapid changes in research, teaching and knowledge and technology transfer. It is important that both the relevant building eras remain recognisable and, simultaneously, that skilful changes facilitate the buildings' further development as far as the future is concerned. This creates a challenging interplay between preservation and modernisation.



ETH Zurich uses the main hall in its main building as an attractive venue for events and exhibitions.

Overview of inventoried properties owned by the federal government

(Last updated: 31.12.2018)

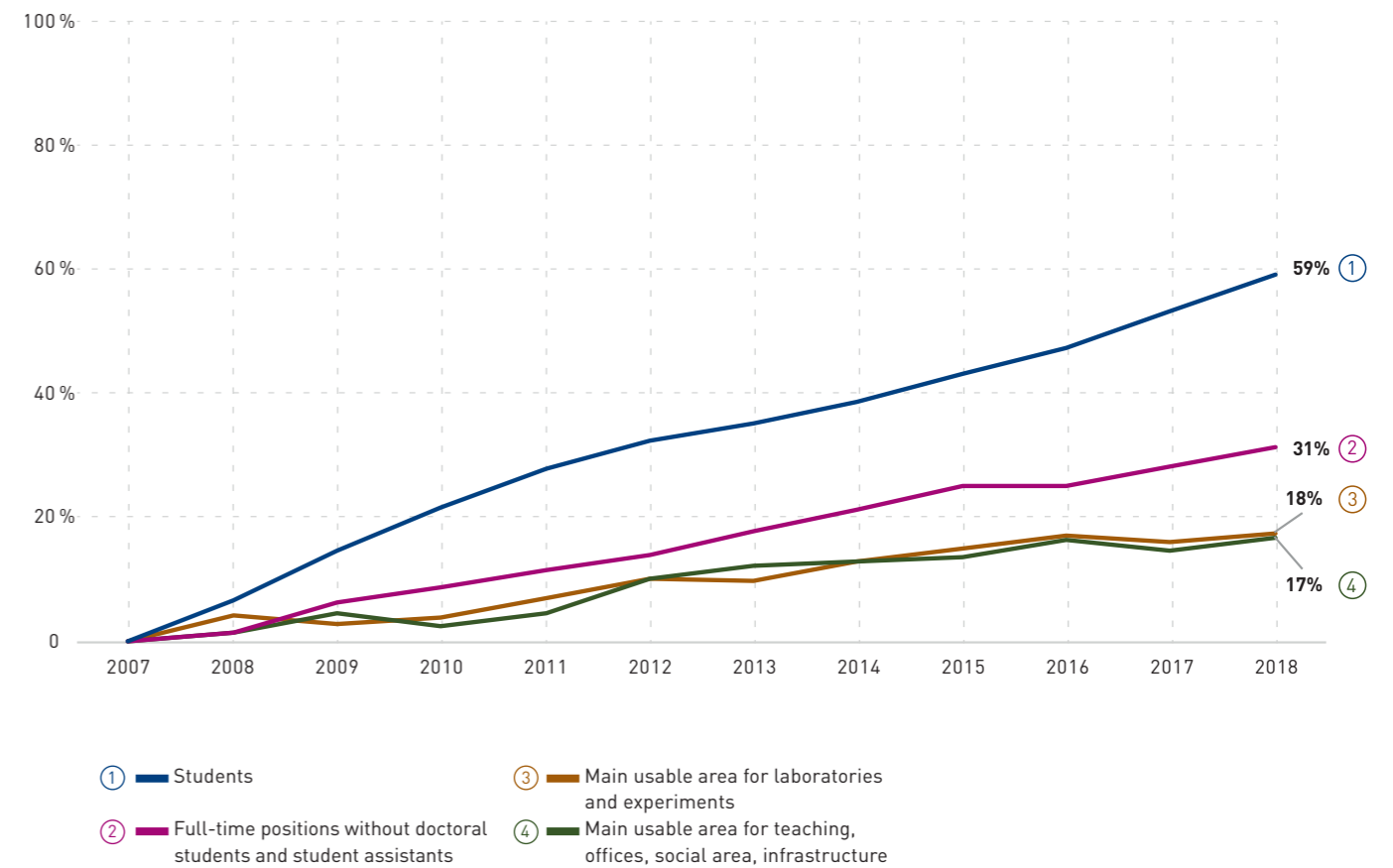
	Cantonal inventory		Communal inventory	
	Zentrum campus	Hönggerberg campus	Zentrum campus	Hönggerberg campus
Number of properties	5	0	16	9
Number of m ² of MUA	46 997	-	44 890	42 984

Table: Summary of properties potentially worthy of protection at the Zurich site. No inventoried properties at the "other sites".

Developmental prospects

Over the last decade, a gap has opened up between the development of the so-called "demand drivers" – teaching and research – and the space available for the Academy. A great deal of effort is required to prevent this gap from widening further against the background of the growth in student numbers forecast by the federal government and taking into account ETH Zurich's strategic development planning. The basic prerequisites for a positive development in this regard are a stable financial basis, efficient planning and construction processes and areas with high development potential.

The increasing third-party funding provided by the Academy creates an additional major challenge for the provision and financing of infrastructure. The overhead from third-party funds drawn on by the Executive Board is too low to be able to finance the overall surface increase. Third-party funds for the construction of infrastructure should also be made available to a greater extent, this with the assistance of the ETH Foundation, for example.



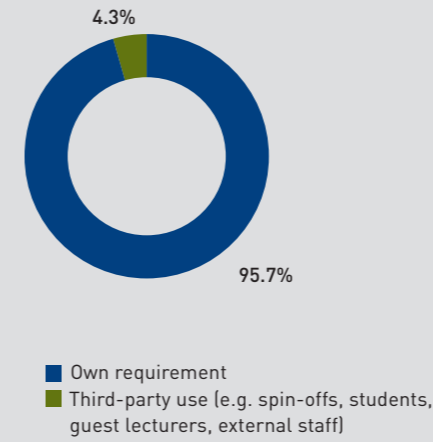


ETH Zurich's real estate portfolio includes infrastructure for a wide variety of uses (images 1-6, continued on the following pages):

- 1 Many research areas can be utilised by users with the ultimate flexibility. The example of the Future City Lab in Singapore is shown here.
- 2 ETH Zurich's libraries hold valuable collections and archives and provide work places for students and researchers.
- 3 The Academic Sports Association of Zurich (ASVZ) sports centres offer ETH members an attractive and varied range of training opportunities.

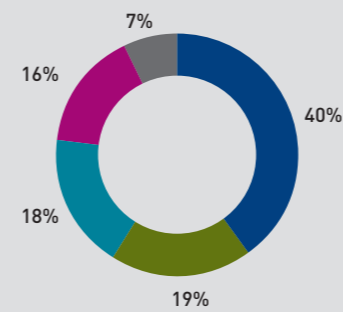
Use (% of surface)

[Last updated: 31.12.2018]



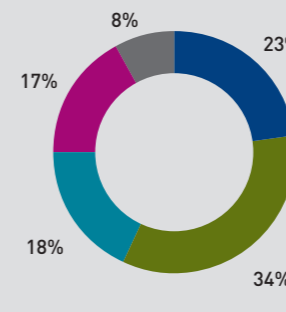
Zentrum campus

Share of MUA (215,226 m²)



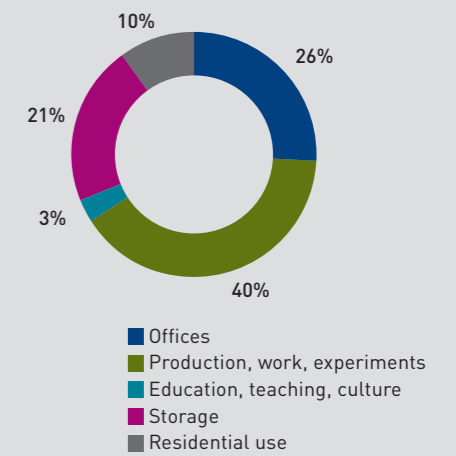
Hönggerberg campus

Share of MUA (215,242 m²)



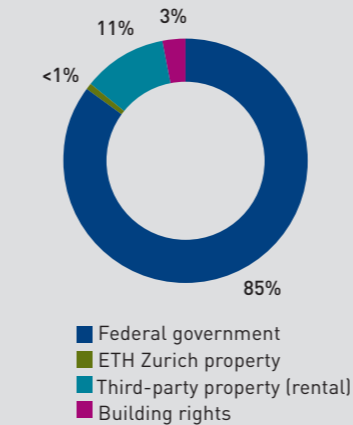
Other sites

Share of MUA (48,582 m²)



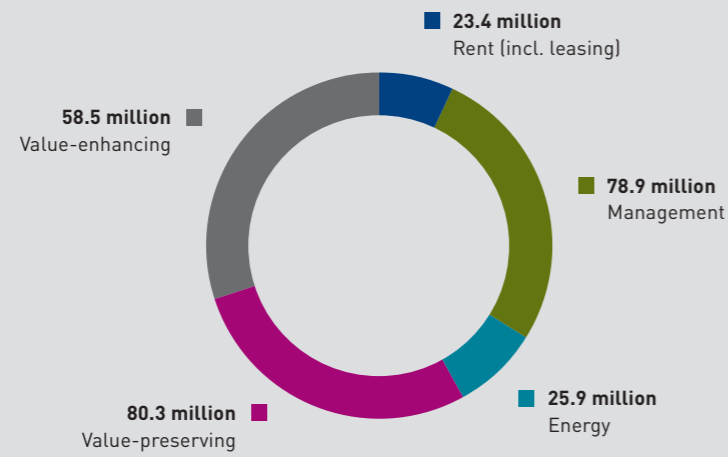
Ownership (% of surface)

[Last updated: 31.12.2018]



Costs

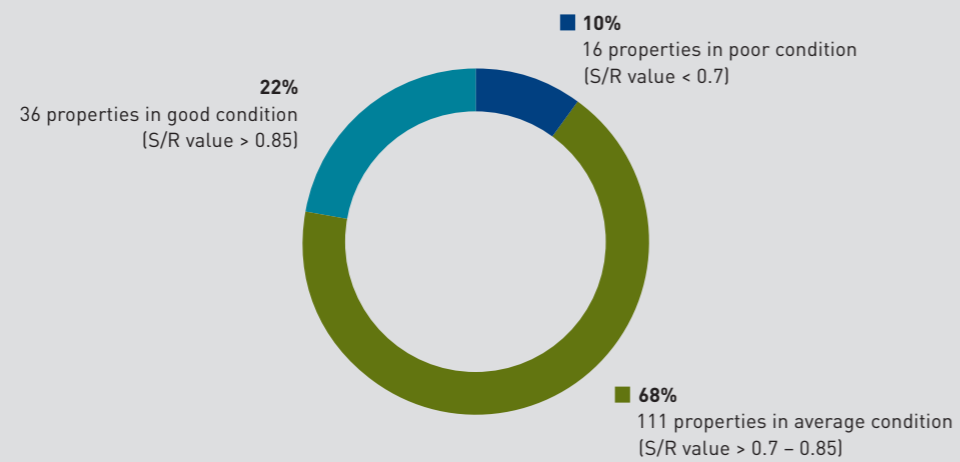
[Last updated: 31.12.2018]



Condition of the properties

[Last updated: 31.12.2018]

The database contains 163 properties owned by the federal government. The average status vs. reinstatement value (S/R value) of these properties is 0.82.



4 Technically highly equipped laboratories enable state-of-the-art research under safe working conditions. This is illustrated here by the example of a laboratory in the field of life sciences.

5 ETH Zurich is also committed to providing attractive and affordable living space for students on its own campus.

6 ETH members and visitors can enjoy a variety of canteens, cafés and bistros.

2. Vision

**Real estate create
an inspiring environment
for ETH Zurich
now and in future.**



With its sweeping views of Zurich, the Polyterrace forms the link between ETH Zurich and the city of Zurich. It is very popular with ETH members and visitors alike.

3. Mission

ETH Zurich is a responsible, sustainable, dynamic and innovative developer, user and operator of its real estate portfolio.

The Real Estate Management department seeks to improve its performance and quality at all levels through an active, open cooperation between all internal and external stakeholders at ETH Zurich. It aims to be perceived as a professional and efficient real estate body within ETH Zurich, by the authorities, the ETH Board and peers, as well as in the construction and real estate markets.

Real estate is an excellent, flexible and strategic resource for the excellence of ETH Zurich in the core tasks of teaching, research and the transfer of knowledge and technology. The development of the real estate portfolio will be oriented consistently towards future academic development, the principles of sustainability and the preservation of the invested values.



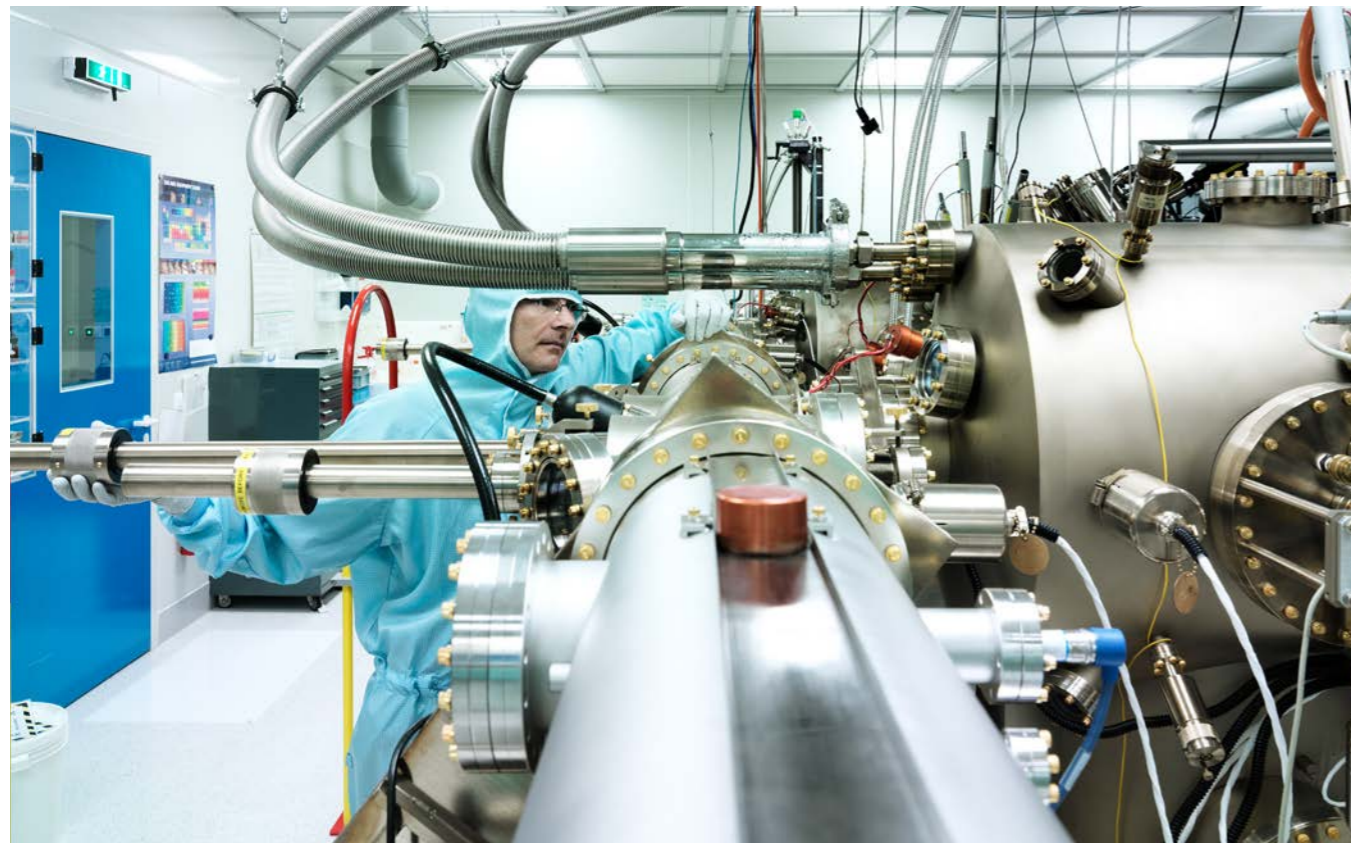
The excellent infrastructure at ETH Zurich is characterised by research laboratories of the highest quality. This is illustrated here by the High Voltage Laboratory within the Institute for Power Systems & High Voltage Technology.

4. Strategic principles

With the following ten strategic principles, the Executive Board defines the long-term goals for real estate management at ETH Zurich.

They are derived, on the one hand, from the specifications of the ETH Board and the federal government, and from the academic strategy process pursued by ETH Zurich.

The strategic principles are not listed in any particular order; nor do they reflect a specific prioritisation. Principles 1 to 4 are based on the academic strategy process. Principles 5, 6 and 10 relate to economic efficiency, and principles 7 to 9 to the sustainability of real estate management.



ETH Zurich plans and executes infrastructures with the highest technological requirements for the research of today and tomorrow. This is illustrated by the example of the cleanroom in the FIRST Lab on the Hönggerberg campus.

First principle

ETH Zurich provides excellent working infrastructure to attract the best qualified staff and highly motivated, talented students.

Fields of action	Measures applied
The properties are geared to the future needs of the users.	<ul style="list-style-type: none"> - Orientation towards the standards of the world's leading technical universities for new buildings, conversions and redevelopments. - Active involvement of users in the planning process.
The building infrastructure must be flexible and retrofittable in the long term in order to keep pace with the accelerated change in requirements.	<ul style="list-style-type: none"> - A practical, use-neutral basic construction standard is aimed at in the case of the majority of infrastructure. - Modular design of building services engineering with reserves in the central and riser zones. - Modifiability and retrofitting without restrictive effects on ongoing operations. - Proof of flexibility in the floor plan design (occupancy, work processes, equipment/connections).
Increasingly precise measuring and analysis methods for cutting-edge research require buildings that largely avoid or absorb external influences.	<ul style="list-style-type: none"> - Sites without restrictive external influences are always sought if sensitive utilisation is required. - Specific infrastructures are planned and built in a manner that ensures influences proceeding from the environment into the building are largely eliminated.
Ensuring working conditions that meet requirements with a high level of safety and availability.	<ul style="list-style-type: none"> - Real estate-related risks relating to security and availability (business continuity) are actively monitored. - Proactive planning of measures and regular reporting of the important risks identified by means of risk management.
Offering barrier-free infrastructure.	<ul style="list-style-type: none"> - Facilitating access to ETH Zurich services and infrastructure for people with physical disabilities or special needs.

Second principle

Real estate management is geared consistently to future academic development.

Fields of action	Measures applied
Infrastructure development is prioritised according to the key focus areas of academic strategy and development planning.	<ul style="list-style-type: none"> - Spatial support for skills development in the fields of "Data Sciences and Quantum Engineering" and "Health and Medicine". - Providing research infrastructure for the development of future-oriented manufacturing processes, production technologies and materials. - Promoting strategic alliances with partners.
Innovative teaching is supported by a diverse, modern and attractive learning infrastructure.	<ul style="list-style-type: none"> - Flexible auditoriums with modern AV media technology promote diverse, innovative learning. - Creating collaborative spaces for applied research and knowledge transfer such as Student Project Houses. - Anticipating expected growth to avoid bottlenecks in curriculum development.
The building infrastructure supports knowledge exchange, transformation and innovation promotion.	<ul style="list-style-type: none"> - Creating Innovation and Entrepreneurship Labs (ieLabs, Incubators etc.) - Creating positive spatial conditions for the effective involvement of learners in research and transformation. - Providing informal contact opportunities for learners, researchers and companies (e.g. event locations, cafés, sports).

Third principle

ETH Zurich ensures the timely availability of the building infrastructure.

Fields of action	Measures applied
Proactive planning and securing of real estate.	<ul style="list-style-type: none"> - Active preservation of interests relevant to real estate at the existing sites, in particular at the Zentrum and Hönggerberg campuses in terms of consolidation of use and replacement of new buildings. - Active cultivation of real estate market knowledge at the existing locations in order to be able to meet new or altered space requirements at short notice. - Provision of necessary development and transitional areas.
Applying suitable models for infrastructure provision (construction, purchase, rental).	<ul style="list-style-type: none"> - Ownership of ETH buildings is a fundamental priority. Renting laboratory commodity and office commodity infrastructure follows defined guidelines. - Developing and implementing sub-strategy models for the provision of the infrastructure with the specifications regarding construction, purchase and rental.
Establishing lean processes in real estate management with reliable implementation deadlines.	<ul style="list-style-type: none"> - Development and implementation of a sub-strategy to increase efficiency and improve business processes.
The provision of building infrastructure is a top priority as far as the filling of professorships is concerned.	<ul style="list-style-type: none"> - See Principle 5 and sub-strategy prioritisation.



Today's teaching needs innovative and flexible premises, illustrated here with the example of a classroom at the Department of Architecture.



Fourth principle

Real estate management helps to develop and consolidate common sites, clusters and platforms.

Fields of action	Measures applied
The building infrastructure supports interdepartmental and interdisciplinary exchange.	<ul style="list-style-type: none"> - Creating infrastructures for interdisciplinary cooperation. Cooperation in technology platforms should be strengthened. - Plan areas for informal contact opportunities between departments and disciplines.
The site strategy specifically promotes an exchange with society and industry as well as partnerships with universities and research institutes in Switzerland and abroad.	<ul style="list-style-type: none"> - Spatial promotion of the "Personalized Health Alliance Zurich-Basel" at the Zurich, Ticino and Basel sites. - Promotion of the "Switzerland Innovation Park Zurich". - Support for the "Singapore ETH Centre" (SEC). - Further development of the "User Laboratory for Simulation-based Science" at CSCS in Lugano¹. - Expansion of the portfolio with strategically important additional sites.
The long-term scope for the target-oriented development of the real estate portfolio is actively maintained.	<ul style="list-style-type: none"> - Adjustment of the special building regulations for the Hönggerberg campus to allow further expansion of space. - Creating long-term expansion options in the Central Zurich Higher Education Area (HGZZ). - Creating room for manoeuvre with regard to mobility, supply and disposal on the two campus areas. - Concentration of leased space at the Zurich main site in the strategically important areas of Oerlikon, Lengg and Zurich West.

¹ Swiss National Supercomputing Centre

1 Cooperation between partners in the Central Zurich Higher Education Area (HGZZ) is of great importance to ETH Zurich. This is strengthened by infrastructural proximity and shared platforms.

2 ETH Zurich is constantly developing its modern university campus on the Hönggerberg. Half of the university's operations now take place on the Hönggerberg campus.

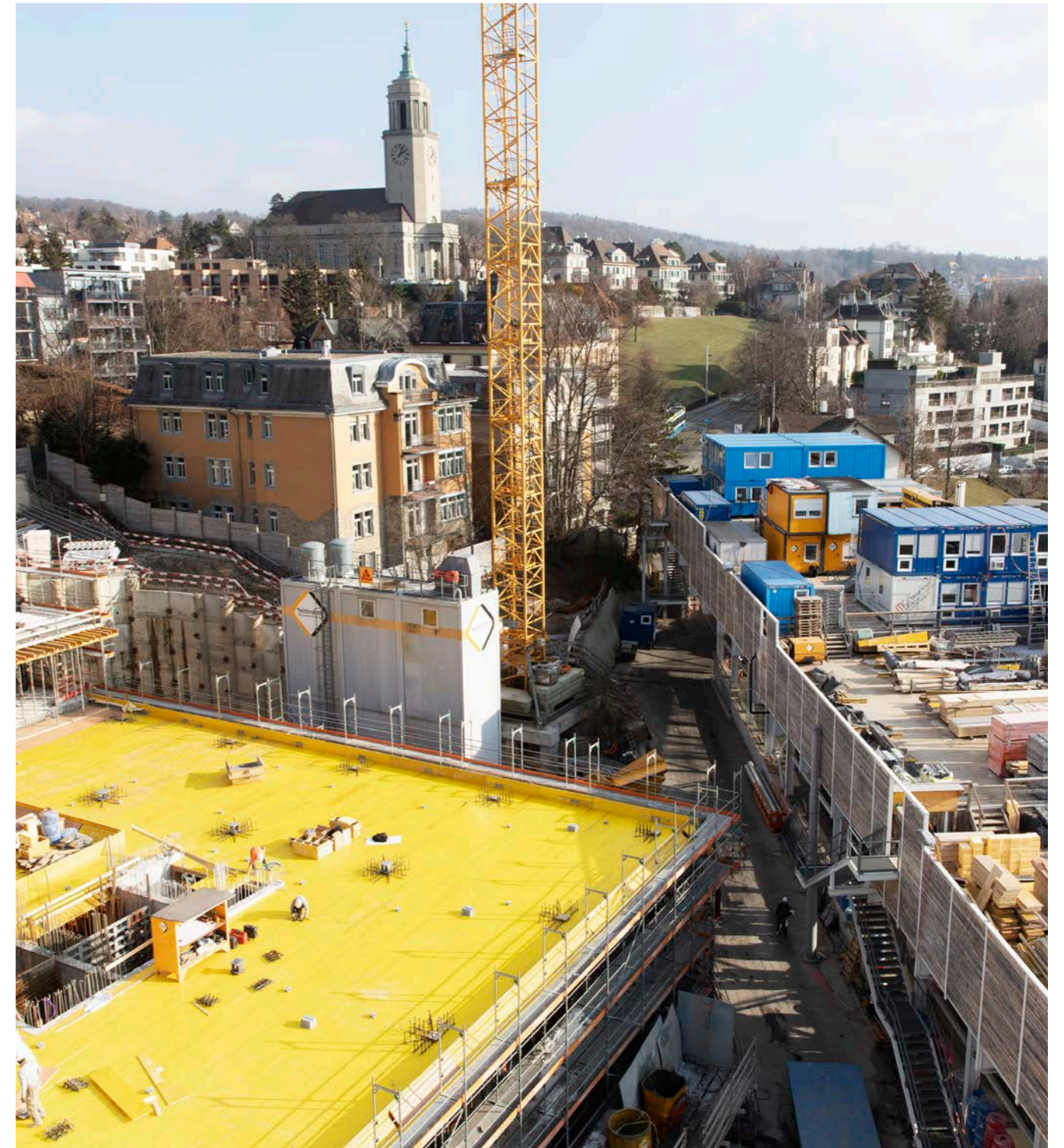
Fifth principle

Construction projects are prioritised according to importance, urgency, financial viability, sustainability and project maturity.

Fields of action	Measures applied
Appropriate maintenance of function and value.	A corresponding sub-strategy for the implementation of these fields of action will be formulated and applied (see Chapter 5).
Differentiation according to core and disposable inventory.	
Prioritising new buildings and conversion projects, maintenance, repair and real estate transactions in accordance with Principle 3 with highest priority given to the establishment of professorships.	



To ensure the future development of the department of Biosystems Science and Engineering, a new building will be constructed at the Basel site, close to industry and to the University of Basel.



Even under difficult inner-city conditions, ETH Zurich is constantly renewing and expanding its infrastructure to guarantee the excellence of its university.

Sixth principle

ETH Zurich pursues its real estate management transparently.

Fields of action	Measures applied
Transparency of the property holdings.	<ul style="list-style-type: none"> - Development of a system of parameters and performance indicators in coordination with Art. 12 of the ETH Board's Directive on Real Estate Management and the relevant sections of the Executive Board. - Preparation and updating of the parameters and performance indicators.
Transparency in the use of financial resources.	<ul style="list-style-type: none"> - Active maintenance of the exchange of experience between the construction financing bodies (ERFA Fin Bau). - Proof of the efficient use of financial resources for maintaining the value and operation of the properties by means of benchmarks and the use of existing tools.
Orientation towards market standards for commodities.	<ul style="list-style-type: none"> - Active market price observation for purchase and rental at the relevant locations. - Active market observation with regard to space and construction standards.
Orientation towards industry standards of the world's leading technical universities for ETH-specific uses.	<ul style="list-style-type: none"> - Actively fostering the exchange of experience with technical universities on construction, safety, space and cost standards for top-flight research infrastructure.

Seventh principle

ETH Zurich focuses on consolidating the use and increasing the density of existing buildings.

Fields of action	Measures applied
Efficient use and allocation of the existing building infrastructure.	<ul style="list-style-type: none"> - Development of performance indicators for the efficient use and occupancy of laboratory, office and teaching space. - Periodic review of room occupancy based on the performance indicators and optimisation of occupancy in cooperation with the departments. - Implementation of processes for consolidation of use with the involvement of the departments and central bodies.
Before expanding into new areas, the feasibility of consolidating the existing portfolio is always analysed.	<ul style="list-style-type: none"> - Proactive examination of the potential for structural densification in all existing properties and areas. - ETH Zurich safeguards its interests in the densification of existing buildings in all relevant planning procedures.



The steady growth of ETH Zurich requires a gradual expansion of the infrastructure. The Master Plan 2040 for the Hönggerberg campus anticipates an internal consolidation of 50%.

Eighth principle

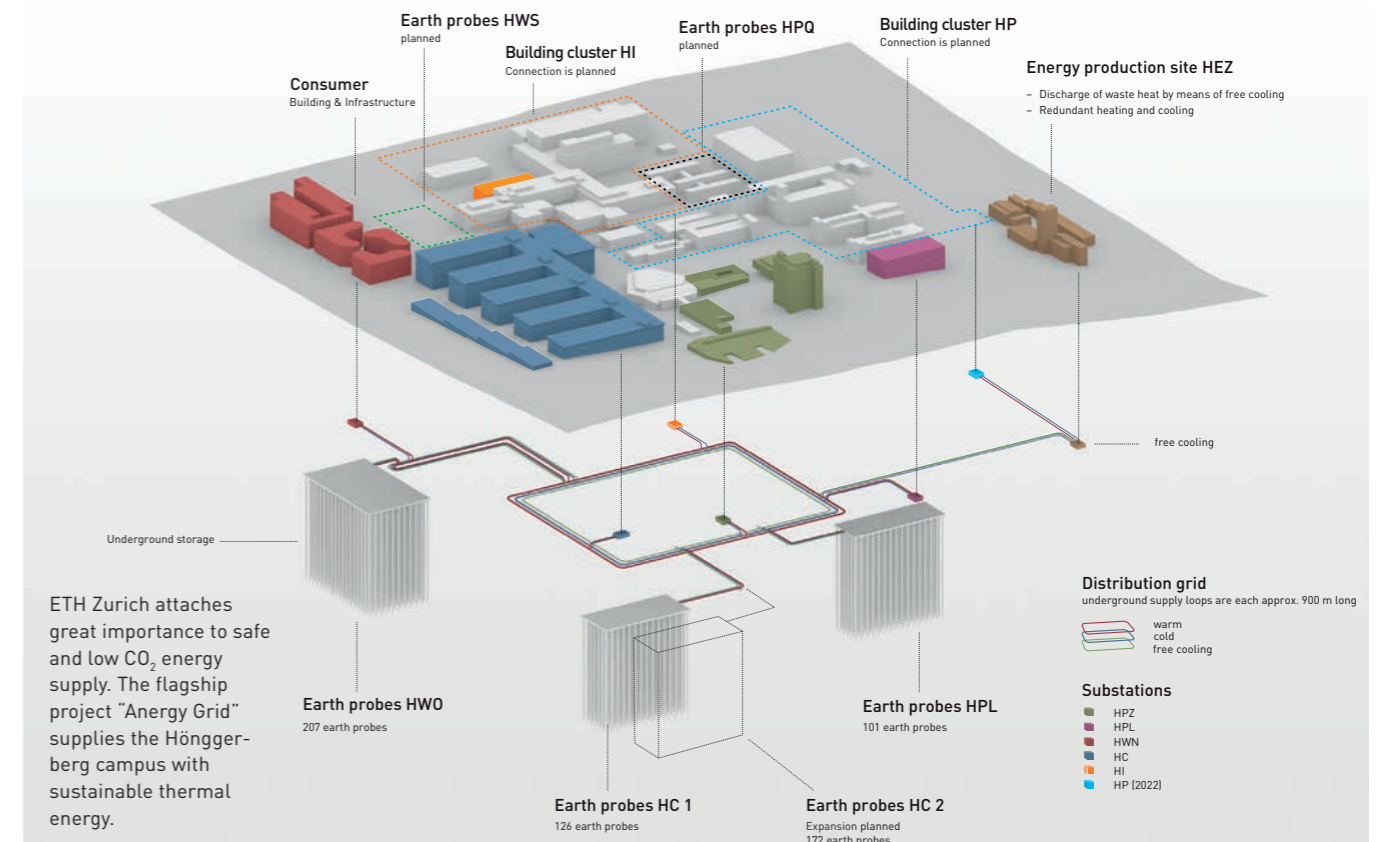
ETH Zurich is committed to the careful use of natural resources and to reducing environmental pollution.

Fields of action	Measures applied
Careful handling of the natural resources soil, water, air and natural raw materials.	<ul style="list-style-type: none"> - The SGNi standard* or a comparable standard is applied consistently in large-scale projects. - The sustainability principles from the "Sustainability" guidelines issued by the Real Estate Management department are applied in the context of other projects.
Promotion of natural habitats and preservation of townscapes and landscapes.	<ul style="list-style-type: none"> - Anchoring of sustainability in project development and implementation.
Reduction of pollutants, noise and radiation by means of the precautionary principle and emission reduction at source.	<ul style="list-style-type: none"> - Anchoring of sustainability in the real estate management of ETH Zurich (barrier free, functionality, overall energy assessment, contaminated sites/pollutants etc.). - Promoting Living Lab concepts to test innovations.
Reducing CO ₂ emissions through improved energy efficiency and increasing the proportion of renewable energies and optimised use of materials.	<ul style="list-style-type: none"> - High energy efficiency in new buildings. - High proportion of renewable energies in terms of energy supply. - Avoidance of fossil fuels in new buildings and renovations. - Continuous improvement of energy efficiency through operational and structural measures in existing buildings. - Optimisation of component separation and materialisation in terms of recyclability.

* Swiss Sustainable Building Council



ETH Zurich, Campus Hönggerberg Energy Grid



Ninth principle

ETH Zurich is committed to preserving building culture.

Fields of action	Measures applied
Promotion of high quality in terms of urban development and of timeless, functional architecture.	<ul style="list-style-type: none"> - Use of suitable planning procedures in order to achieve high architectural and design quality. - The buildings of ETH Zurich should exemplify timeless architecture and high functional quality and blend into their surroundings appropriately.
Fulfilment of responsibility in the urban space, for the protection of historical buildings, monuments and local architectural heritage, as well as for listed buildings.	<ul style="list-style-type: none"> - Constructive dialogue is maintained with the authorities relevant to the preservation of historical monuments. - ETH Zurich's listed buildings bear witness to their societal anchoring, which in itself helps to preserve and enhance them.



Conflicting priorities between the protection of historical buildings, monuments and local architectural heritage and the requirements of modern infrastructure are omnipresent in the portfolio of ETH Zurich. Innovative solutions are sought through constructive dialogue (example of focusTerra in the NO building).

Tenth principle

ETH Zurich strives to increase efficiency in the use of resources and to improve business processes continuously.

Fields of action	Measures applied
Efficient use of resources in real estate management.	<ul style="list-style-type: none"> - Utilisation of market knowledge, parameters and performance indicators on the basis of Principle 6. - Establishing a consistent "make-or-buy strategy" for infrastructure and services.
Buildings and infrastructure are designed for low life-cycle costs.	<ul style="list-style-type: none"> - When making major investment decisions, always consider the investment and life-cycle costs. - Optimisation of life-cycle costs by analysing alternatives in construction projects. - Systematic application of the ETH life-cycle cost tool.
Improvement of business processes, collaboration and tools.	<ul style="list-style-type: none"> - Development and implementation of a sub-strategy to increase efficiency and improve business processes (incl. purchaser competence of the departments). - Provide efficient tools/auxiliary resources for the project managers.



ETH Zurich relies on the latest technologies in the planning and construction of its buildings. Here, this is illustrated by the use of Building Information Modelling in the redevelopment of the HIF building.

5. Derived sub-strategies

The sub-strategies are derived from the contextual framework and the ten strategic principles. The contents of the sub-strategies are briefly described below.

The sub-strategies are reviewed at the same intervals as the real estate strategy at a minimum, and updated as necessary. The Portfolio Management division is responsible for the lead management. The VPIN submits the sub-strategies to the Executive Board for approval. They form the basis for the overall spatial and financial concept which ETH Zurich submits to the ETH Board for approval every four years.



Excellent infrastructure is a central factor in the success of ETH Zurich. Strategic real estate planning requires the anticipation of academic developments (example: the HCI building, which is used for the departments of Chemistry, Biology and Materials Science).

Sub-strategy	Contents
Demand development, sites and platforms.	<ul style="list-style-type: none"> – Drivers of demand development (number and subject areas of students, professorships, posts). – Academic focuses of infrastructure development (cf. Principle 2). – Development potential of current and future sites. – Location of the departments, the interdepartmental initiatives of the technology platforms and the sites shared with partner institutions at home and abroad.
Models for infrastructure provision (construction, purchase, sale, exchange and rental).	<ul style="list-style-type: none"> – Primacy of ownership of long-term owner-occupied space; guidelines for rental solutions. – Construction as the rule for owner-occupied properties, especially research and special buildings. – Application of tailor-made models (e.g. building law, investor model) for properties used outside the core activities. – Strategy for handling third-party funds.
Prioritisation according to importance, urgency, financial viability, sustainability and project maturity.	<ul style="list-style-type: none"> – Value sets and financial requirements for the long-term maintenance of the portfolio's functionality and value. – Criteria for prioritising plans for new construction and conversion (academic versus construction priorities, including student housing, spin-offs, peripheral uses, etc.). – Criteria for prioritising projects according to the principles of sustainability (see Strategic Principles nos. 7 - 9).
Facility management (Contains various sub-strategies of the departments Facility Management, Real Estate Management and Services for the commercial, infrastructural and technical facility management of the building infrastructure).	<ul style="list-style-type: none"> – Cooperation of the Real Estate Management and Facility Management departments with the other departments. – Facility management strategy (service catalogue and service standards, maintenance, supply and disposal, internal/external contracting, cleaning, logistics etc.). – Division of tasks between VPIN/Real Estate Management and departments in the allocation of space.
Increasing efficiency and improving business processes.	<ul style="list-style-type: none"> – System of parameters and performance indicators for construction, purchase, rental and management (occupancy and operation) of buildings. – Principles for the separation of the core and disposable inventory. – Lean management principles for construction, purchase, rental and management. – Governance and risk management principles. – Application and improvement of new and existing tools.
Ensuring efficient, secure, cost-effective and ecological energy and media supply.	<ul style="list-style-type: none"> – Implementation of the "Energie Zentrum" master plan. – Further development of the "Anergienetz Höggerberg Campus" energy network project. – Implementation of the photovoltaics master plan.

Contact

ETH Zurich
Real Estate Management Department

www.ethz.ch/realestatemanagement