

Company profile

**Address the future  
before it arrives.**

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## The energy revolution is coming. But not without our help.

In our day and age too much energy goes unused. Considerable potential could be exploited immediately and cost effectively by networking thermal and electrical energy systems and feeding solar heat into integrated heating systems and energy grids, for example. The decentralised storage of solar electricity, which can now finally be put to private use, could become a significant factor in Switzerland's electricity supply. Consumption can also be further reduced: simply by using a modern energy controlling system the amount of energy consumed by buildings can be cut by an average of 5 to 15% and maintained in the long term.

Immediate targeted measures taken to lower consumption are often amortised after just one to two years.

On issues surrounding energy efficiency, renewable energy and sustainability, many private and public sector clients and over 80 towns and communities in Switzerland trust in the expertise of Amstein + Walthert. The technology is available, the expertise is there – and the time to act is now.

Anergy grid at the ETH Zurich, Hönggerberg

**In order to halve the CO<sub>2</sub> emissions on campus, the heat emitted by servers and laboratory equipment is 'bunkered' in underground storage tanks over 150 metres deep and used for heating in the winter.**





## Buildings which function in the cloud before they are even built.

Today, digitisation is also placing the construction industry on a completely new footing. This sector, which in the last 50 years seemed barely capable of bettering its production, is now planning established interfaces, reducing redundancies and even rectifying faults in a digital environment before they occur. Thanks to BIM or Building Information Modelling buildings first evolve as functioning simulations, constructed collaboratively by all the companies involved in the project. The steadily growing database is available to everybody throughout the entire life cycle of the building;

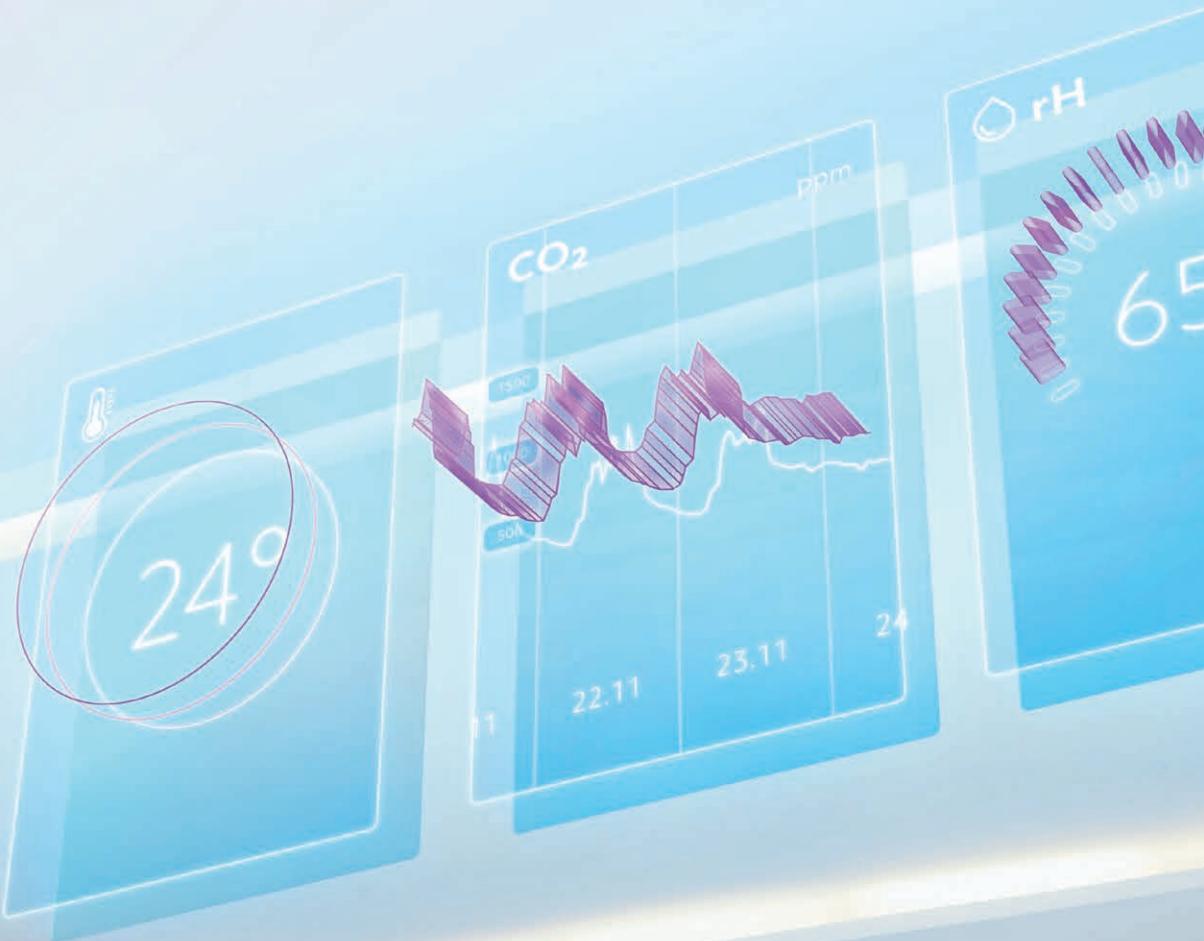
any misunderstandings and friction are immediately removed by simulation. Costconscious clients are sure to support this procedure if you demand it.

In order to push this development throughout the entire sector, Amstein + Walther has co-founded the Building Digital Switzerland campaign group and chairs its first committee. Building Digital Switzerland is an open platform which addresses the topic of digitisation in the construction industry and covers the entire value chain in this sector.

### «Big BIM» Inselspital Bern

**Building sector 12, part of the new island hospital complex in Bern, is probably one of the largest and most demanding BIM projects in Switzerland. Here, general contractors, hospital planners and building service engineers from all sectors work hand in hand in a virtual environment.**





## Buildings should not make people ill.

When people become ill because they spend all their time indoors, you may merely dismiss it as a disease of civilisation. Alternatively, you can prescribe modern construction technology to treat what are known as sick building syndromes or building-related illnesses. These include a whole host of asthmatic and allergic conditions, bacterial diseases and all kinds of stress symptoms. Spread over 30 years, the cost of planning and constructing a company building is just 2%, while personnel costs amount to 92%. It is thus worth optimising

factors such as temperature, humidity, draught, acoustics, light, electromagnetic radiation and other things with regard to the effect they have on people. Building sustainably means building for people's health and well-being.

Since it was founded in 1927 Amstein + Walthert has been a prominent player in the healthcare sector. Accordingly, we are also fit in corporate healthcare, all aspects of which are covered by our expert IQ interior quality team.

For the good of the children at the KJPD, Männedorf

**In the new building erected for the KJPD, or child and adolescent psychiatric service, the ambient air concept, noise control and impact sound insulation help to ensure successful treatment. Amstein + Walthert has contributed with advice on how to obtain the Minergie-P-ECO standard.**



© Beat Bühl



## Mobility is on the move.

One hundred years ago 40% of all cars in New York were electric. Today, this would be progressive – but logically problematic. There are not enough charging points or capacities. Holistic concepts are lacking as to how energy generation, storage and intelligent distribution (smart grid) can be decentralised as far as possible. In such concepts the car becomes a mobile energy storage system which supplies the tumble dryer in the evening, for example. It is high time to think and plan our

mobility in larger dimensions. Public transport must dovetail seamlessly with individual forms of transportation to stop our ecological footprint from being eroded.

On this complex issue Amstein + Walthert has taken a front seat. There is a lot to do – for the change to renewable energy is racing ahead. Society has expectations; politics is establishing the general framework. It is up to us to provide the solutions.

Mobility management for Familienheim-Genossenschaft Zürich

**The family home cooperative in Zurich is a member of the 2000-watt-society – also when it comes to mobility. Amstein + Walthert has suggested 23 measures which, when implemented, will continuously improve the various mobility options for the cooperative's inhabitants.**



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## Safe despite threats.

In the hierarchy of human needs the desire for safety comes second only to the longing for food. What to prehistoric man was a protective shelter is today a technological challenge of the first order. In modern caves, such as tunnels for cars, protection is a matter of providing complex systems which ensure active and passive safety. We defend ourselves against the primeval force of fire with sophisticated fire protection and

evacuation concepts. As if real life did not pose enough risks, we are also subject to many different dangers in the digital environment.

Safety means solving problems before they occur: with projections and simulations, by thinking out scenarios and eventualities. Professional pessimism is one of our strengths. It results in solutions which make people safer.

Safety in the longest tunnel in the world

**At 57 km the Gotthard Base Tunnel is the longest railway tunnel in history. Amstein + Walthert was responsible for the entire planning of the low voltage supply system and installations for personal escape and rescue by the emergency services.**





## Everything points to the future.

Amstein + Walther is fully owned by executive personnel who are involved in the day-to-day running of the company. And this is a good thing. Our company is not steered by investors but by experts who know what they are talking about and love what they do. This was also the case when the business was founded in 1927. At that time the company planned electrical installations for larger public and private buildings and very soon also for hospitals in particular. What was known as the electrification of the railways, namely in Costa Rica and Spain, presented further remarkable challenges for the small Swiss engineering firm.

Almost 100 years later and with over 800 employees we are now one of Switzerland's market leaders in consulting and engineering. Our range of engineering services still caters for hospitals, public transport and all 'electrified' facilities. Yet the world has changed and we have played our part in this. We wish to continue to do so with our expertise, ideas and commitment. The future is exciting – and we are part of it.



## Bringing about change means getting involved.

Many of the challenges of our day and age can only be mastered if we pool our resources. This is why we are active members of all the renowned associations, political organisations and campaign groups in our branch of industry – usually holding key positions. Where the transfer of knowledge is required and where basic and further training is provided, we are happy to pass on our expertise. Where standards are defined and adopted for our sector, we campaign for the best solution for all sides.

We have a strong voice. Thanks to our reputation and position on the market, many doors are open to us. We do not hesitate to bring our influence to bear – but not purely for our own benefit. We always think of the greater good, of the relevance to our industry and the significance for society as a whole. We do not use our influence to demand improvement but to contribute to it.

### Forum to strengthen the industry

**With the A+W Forum we have created a platform to promote interdisciplinary exchange. Various players from the construction industry meet here to talk with the aim of creating added value for the entire sector as a team. A+W Forum means working together – and not every man for himself.**





## Progress is a question of education.

People have only come this far because they did not have to keep reinventing the wheel. If expert knowledge is passed on, each generation can build on the expertise of their forebears. At Amstein + Walthert we have internalised this quintessential aspect of progress and have set up our own company academy.

The programme of basic and further training at A+W University completes and updates our staff's wealth of knowledge, thus making them the perfect partners for meeting the demands of our

customers. Here, they not only learn all they need to know about thermal energy in civil engineering, hygiene in ventilation and air conditioning systems or guidelines for installing telecommunications facilities: personality training is also high on the list of educational measures, with the course on customer communication taking precedence. Alongside the obligatory programme, many of the voluntary courses are met with keen interest, this mostly fired by our in-house tutors but also by guest lecturers. All in all, our company provides well over 2,000 hours of training each year.

### Extensive training measures

**The training of young specialists in the central fields of electrical engineering, building systems engineering and computer science is also a task to which Amstein + Walthert affords the highest priority. Our trainees receive intensive support from those members of our staff responsible for vocational education.**



