The Art of Engineering – Our Passion
Complete Solutions for Energy, Infrastructure and the Environment
Dear Readers

With almost half a century of regionally focused experience, our aim is to bring Swiss engineering expertise used to meet the demands and complexities of an Alpine setting to a wider international clientele. We believe we can share this unique technical know-how with countries facing the challenges of similar topographical conditions. To strengthen our international foothold and increase our proximity to our international client base, we have recently opened offices in Belgium and Georgia.

We are a leader in hydroelectric power, dams, civil and structural engineering and tunnel construction. Highly respected by our peers and the preferred partner of utility companies and federal and municipal clients, our solid reputation as a reliable and highly qualified partner is critical to the success of our business.

We assist clients to look beyond the challenging complexities and to better plan and manage their infrastructure by identifying efficient ways to operate their systems. Creating lasting solutions requires team work. Our multi-disciplinary and multi-lingual teams work closely with the client at all stages of a project so that its intricacies are considered from every angle, thereby ensuring the delivery of a superior, custom-tailored final product.

We are committed to providing our clients with the best possible service and to creating an environment in which our staff can reach their full potential. Honesty, professionalism, ethical conduct and integrity are cornerstones of our business, which are reflected in our practices, policies, project and quality management systems.

We look forward to working with you.

Urs Müller     Olivier Aebi
Chairman of the Board  CEO

Swiss roots, international growth
**Who we are**

**Specialists in Energy, Transport and the Environment**

IM Maggia Engineering AG and IUB Engineering AG are general planners for infrastructural facilities and have been offering sophisticated engineering services for almost 50 years in the specialist areas of power station construction, tunnel construction, hydraulic engineering and general civil engineering. We also have profound knowledge of project management and the construction of electromechanical equipment and infrastructure. Our services include consulting, studies and concepts, project planning, project management, construction and installation management and commissioning.

Around 280 committed employees across the group of companies ensure expert implementation of our contracts. Our core competences include planning and implementing challenging infrastructure projects in the fields of hydraulic engineering, excavation, civil engineering, mechanical engineering, electrical engineering, automation, telecommunications and IT.

**Owned by Our Staff Since 1968**

IM and IUB belong to the Engineering Group, which was founded in 1970. Its shares are owned entirely by the current employees of the two subsidiaries. Both companies are completely independent of third parties and entirely dedicated to the interests of their clients. A single management team oversees the operations of both companies, ensuring the best use of resources and expertise. IM and IUB have a combined staff of about 280 employees at a number of locations across Switzerland and in Belgium and Georgia, thus ensuring proximity to clients and their projects.

**Our Experts – Our Greatest Asset**

Highly trained and motivated employees with many years of experience are the key to our success. Ongoing training ensures that our specialist knowledge is always up to date and that we are using the latest tools and procedures. To this end, we collaborate closely with universities, public authorities and engineering associations so our expertise is always at the cutting edge of technology. By working with universities, we are also able to attract future talent and continue to evolve. Our project engineers benefit from their previous experience as construction managers.

**A Competent Team**

Our engineers, technicians, construction managers, draughtsmen and specialists in various disciplines all work together in close cooperation. Our teams are geared to individual project objectives and the specific requirements of the client, to ensure the provision of all specialised engineering services needed. Our multidisciplinary approach enables us to successfully tackle even the most complex high-tech projects with seamless coordination. We believe in being honest and open with our partners and clients, and that creating a relationship based on trust is vital to the success of every project.

**Our history – the basis of our success**

- **1968** S.A. Ufficio Ingegneria Maggia is established in Locarno by a group of engineers from the engineering department of the Officine Idroelettriche della Maggia SA and the Officine Idroelettriche di Blenio SA, two local energy production companies.
- **1970** Engineering Società di partecipazioni SA is set up with its headquarters in Locarno as a holding company of S.A. Ufficio Ingegneria Maggia and IUB Ingenieur-Unternehmung AG Bern, which was founded during the development of the Grimsel hydroelectric scheme. The entire share capital of the Engineering Group is transferred to the active staff of the two subsidiary companies.
- **1986** Opening of the IM branch office in Alt­dorf (Uri)
- **1995** Opening of the IM branch office in Fribourg. The Engineering Group now employs over 150 people.
- **1998** Opening of the IUB branch office in Am­steg in conjunction with the refurbishment of the Amsteg hydroelectric power station.
- **2004** Opening of the IUB branch office in Fribourg
- **2006** IEP Ingenieurbureau Eng + Partner AG, Olten and FM Messtechnik AG, Berne, are integrated into IUB. A further IUB branch office is opened in Lucerne. The Amsteg office moves to Alt­dorf.
- **2010** The Engineering Group celebrates its 40th anniversary – now with a staff of more than 200 employees.
- **2013** Opening of the IUB and IM branch office in Zurich. The Group employs a total staff of around 280 employees.
- **2017** The Engineering Group goes interna­tional: Founding of IM Engineering Eurasia LLC in Tbilisi/Georgia and acquisition of ICN Associates SPRL in Kraainem/Belgium renamed IM Engineering Belgium Ltd.
OUR PROJECTS IN 2017

1. ENERGY PRODUCTION AND DISTRIBUTION
2. ENVIRONMENT
3. TRANSPORTATION
4. WATER & SANITATION
5. BUILDINGS

LOCATED IN
Switzerland
Georgia
Belgium

PROJECTS IN 20 COUNTRIES

280 COMMITTED EMPLOYEES

36% CIVIL ENGINEERS
29% ELECTRICAL ENGINEERS
1% MECHANICAL ENGINEERS
15% DRAUGHTSMEN
7% APPRENTICES/TRAINEES
12% ADMINISTRATIVE STAFF

107 HYDROPOWER PLANTS WITH A TOTAL CAPACITY OF 16'800 MW, 21 LARGE Caverns in Mountains, 96 KM OF RAILWAY TUNNELS, 156 KM OF ROAD TUNNELS, 345 KM OF ROADS, 75 ROAD AND RAILWAY BRIDGES, 459 KM OF GALLERIES, 43 FLOOD PROTECTION PROJECTS, 48 CABLE CARS AND FUNICULAR RAILWAYS AS WELL AS NUMEROUS STRUCTURAL ENGINEERING, UNDERGROUND CONSTRUCTION AND INSTALLATION PROJECTS

Project Management
Owner’s Engineers

Design, procurement and commissioning

Consulting and technical assistance
Organisation

Cooperation at an international level

Our base is in Switzerland, but our projects and clients extend across several countries.

Through our subsidiaries in Belgium and Georgia, we connect our knowledge centres with our regional presence, providing integrated services which best benefit our diverse clients and projects, in both the public and private sectors.

We work with our network of carefully selected partners to bring in specialist expertise or local project resources where required, while always maintaining our high standard of service delivery, technical competence and cost effectiveness.

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Sectors

Fields of expertise

The main characteristics of the Engineering Group are our broad knowledge and our wide range of services. We offer high-quality design in a variety of disciplines, from structural and civil engineering to electromechanical engineering, to integrated planning and supervision. We create innovative and economic solutions because everything we do is focused on your projects and aspirations.

Energy infrastructure

Power station construction
We cover virtually the entire process of planning and implementing both high- and low-pressure and pumped-storage hydroelectric installations, from feasibility studies to construction and assembly management during implementation. We are a single solution provider of most of the specialist fields: hydraulic and hydromechanical plant scheduling and optimisation, plant design and feasibility studies, investment planning, underground construction (galleries, caverns), engineering of all electromechanical system parts and energy transmission. We provide state-of-the-art calculation and simulation models in all relevant specialist areas. We also carry our projects to rehabilitate and expand gas, electricity and district heating networks.

Transmission and distribution
As power station design engineers, we have extensive experience in energy production, systems and distribution. We provide specialised services at all stages of the project life cycle, including project design, detailed planning, tendering, installation, supervision and commissioning of hydraulic machines, generators, power feed-in, transmission and instrumentation and control systems.

Environment

Hydraulic engineering and flood protection
Water plays a significant role in our everyday lives, whether for drinking purposes, as healthy river habitats or to generate electricity. We help develop flood defence and/or regeneration measures using ecologically advanced yet simply designed, innovative and economical approaches. We help devise optimised and sustainable solutions for watercourses with or without hydropower utilisation taking all local environmental regulations into consideration.

Water and sanitation
Our experts offer specialist water engineering and sanitation consulting services including design, planning, rehabilitation and expansion of facilities and municipal networks. We evaluate and determine the most appropriate solution for replacement/rehabilitation of municipal networks using different trenchless and open trench solutions, such as microtunnelling and open cut construction, depending on the challenges to be overcome e.g. traffic congestion, proximity to buildings and other utilities. We also advise utility companies on improvements in operation and maintenance, loss reduction and metering and provide training.

Transport infrastructure

Tunnels
We have comprehensive experience in all types of tunnel, gallery and cavern construction for railways, roads and water. Due to the diversity of geological formations in our projects, we have experience in applying different construction methods depending on the conditions from unstable slopes and ground-water to squeezing rock. We undertake complex rock mechanics computations with three-dimensional finite element modelling and non-linear material laws to optimise excavation and support.

Structural and civil engineering
Our core areas of expertise include concrete construction, road and rail construction and bridge building. We design new facilities, undertake structural investigations of existing infrastructures, process redevelopment and renovation schemes, supervise construction work and advise clients at all project phases.
Transport technology and tunnel facilities
We have a broad range of experience in this field, including consultancy for tunnel safety, fire protection and ventilation, and as a specialist for lighting systems, electrical installation, cable systems or low-voltage and medium-voltage facilities for train and road networks. Our service includes writing technical manuals for operating the national motorways.

Automation and information technology
Our portfolio includes traffic management & control systems, surveillance & remote management systems for road and rail traffic. Safety & security equipment such as video monitoring, fire alarm systems and intelligent systems for image analysis are also part of our comprehensive range of services.

Telematics and telecommunications
We are the trusted partner for complex telecommunications projects as well as for private networks such as WAN, MAN or LAN. We provide advice in selecting special radio systems (radio networks, Polycom, Tetrapol, Tetra) and suitable private telephone systems such as PABX or emergency telephone systems. We undertake technology assessments and devise guidelines for national motorways.

Buildings
Residential, commercial and industrial buildings
We provide engineering services relating to the design, construction and supervision of different types of residential, commercial and industrial buildings and their connection to associated infrastructure. Our specialists provide comprehensive services from preliminary or structural designs, to the design of HVAC, electrical and control systems, the development of fire safety plans and construction management and supervision.
Our services for your needs

What we can do for you

Thanks to our breadth of expertise, our wealth of management experience and our comprehensive network of contacts we can provide you with advice and support in a wide range of sectors.

We provide services throughout the entire investment project cycle. From project identification, feasibility studies, planning and design, project management and procurement to construction supervision as well as monitoring and evaluation.

We take pride in our ability to see an opportunity in every challenge and in the overall impact and contribution of our projects to the improvement and development of local communities.

So, whether you are planning to build or upgrade a hydropower station or dam, build a tunnel and road through a mountain, develop a flood defence system, replace a motorway bridge or utility lines or simply want to restructure or improve the performance of your municipal utility services company or need support in setting up a regulatory authority, we can help. Our dynamic team of engineers, technicians, construction managers, project managers, economists, institutional experts and management consultants are on hand to provide targeted support.

For each contract and project, we carefully select the specialists most suited in terms of experience, skills, knowledge and contacts. Our strength lies in planning projects and seeing them through to successful conclusion while always ensuring the client’s requirements and wishes are central to everything we do.
Project management and owner’s engineering services

Our specialists will assist you in the design and management of your project. We support and advise the client’s project manager throughout the duration of the project, with project supervision and control, scheduling and administration and the resolution of technical issues.

Studies and concepts
- Feasibility studies
- Preliminary investigations
- Evaluation of facilities
- Financial assessments
- Modelling

Planning
- Preliminary design studies
- Detailed design
- Project execution
- General planning of multidisciplinary projects

Procurement
- Tender documents
- Evaluation of bids

Supervision
- Construction management
- Site supervision
- Local site management

Commissioning
- Test runs
- FATS
- Monitoring
- Handover
- Acceptance

Consulting, advisory and technical assistance services
- Expert opinions
- Design assessment
- Dispute settlement
- Due diligence
- Reconnaissance of structural deterioration
- Life cycle analysis
- Rehabilitation programmes
- Institutional development and capacity building for public administrations and economic operators
- Policy and regulatory advice for ministries, municipal authorities and regulators
- Improving the operating and financial performance of utility companies: operation and maintenance, commercial management, billing and collection, tariff setting, restructuring and staff optimisation
- Measurement and surveying: 3D laser scanning, real-time monitoring, digital crack monitoring, inclination and convergence measurement, vibration monitoring and electrical conductivity measurement
A selection of project success stories

Different projects, different clients and different partners – but always with the common goal of achieving project success.
A superlative is launched

New Limmern Pumped-Storage Power Plant in Linthal (GL)

Built using the biggest material cableway in the world, constructed in the harshest of terrains, Limmern, the most powerful pumped-storage power plant in Switzerland went into operation in 2016. It is the longest dam in Switzerland and also the highest in Europe, Only the uppermost crown of the immense plant is visible, most of it being concealed inside the mountain.

The new gravity dam on Lake Mutt, with a height of up to 36 metres, is currently the longest in Switzerland, stretching to a length of 1,054 metres. It allows Lake Mutt to rise by 28 metres at an altitude of 2,474 metres above sea level, making it the highest dam in Europe. The raised water level increases the useable water volume from 9 million to 23 million m$^3$. The dam was constructed over three summers due to the high altitude, construction was not possible during the winter period using 68 blocks, each with a length of 15 metres. Recesses at the sides of the blocks allowed a tight interlocking of alternating wall sections. The aggregate for the concrete was recycled from the rock excavated during the construction of the caverns and tunnels to accommodate the infrastructure of the new power plant. Rock, other materials and people were transported up to Lake Mutt from Ochsenstäfeli on Lake Limmern by a cable railway specially set up for the construction site. The concrete was produced at the batching plant at Lake Mutt.

Biggest material cableway in the world

In addition to the cableway from Lake Limmern to Lake Mutt, a further construction cableway for materials and people was installed to connect the installation site on the valley floor (Tierfehd, 817 metres above sea level) to Chalchtrittli (1,860 metres above sea level). It is the biggest material cableway in the world with a load capacity of up to 40 tonnes for special loads. The existing access tunnel to Limmern Dam, which is 3 km long, was constructed in the 1960s, and starts at the Chalchtrittli mountain station. This tunnel not only served as a connection between the two cableways but also played a significant role in developing the site of the underground hydroelectric power station. It was from here that a new access tunnel (Access Tunnel II) leading to the planned central cavern was excavated by drilling and blasting.

Underground central station – the heart of the plant

The underground central station is the heart of the pumped-storage plant. In two immense caverns the water from Lake Limmern is pumped up to Lake Mutt and the flow in the opposite direction generates electricity. The caverns owe their inclined position to the upper reservoir pressure shafts and the difference in altitude between them to the gaps in the Quintner limestone layer.

Four Francis pump turbines operate in the machine cavern, which is 149.9 metres long and 53 metres high. Motor generators on the pump turbines are a technical innovation at this magnitude. They are variable speed thus allowing pump operation to match electricity supply. The medium voltage created is fed into the parallel transformer cavern (L=131.3 m; H=24.3 m), where four machine transformers, each weighing around 220 tonnes, convert the medium voltage power into high voltage power. A new 380 kV overhead transmission line with a length of 17.3 km had to be specially erected, with 65 pylons between Tierfehd and Sool to transport the electricity and connect it to the Swiss high voltage grid.

Client
Kraftwerke Linth-Limmern
c/o Axpo Power, Baden

Engineers
IM Maggia Engineering SA (Lead partner)
IUB Engineering AG
in consortium

Construction cost
CHF 2.1 billion

Construction
2009-2016

Completion
Autumn 2016 (commissioning of first machine groups; all four groups in operation from 2017)
Another world record
An access tunnel 1 (Lot 1) was drilled with a tunnel boring machine from the valley floor in Tierfehd to supply the central cavern and its future operation. This was executed at the same time as the excavation of the caverns which were accessible via access tunnel 11 from Chalchtrittli. Due to the steep gradient of 24%, a funicular railway with a maximum load capacity of 215 tonnes was put into operation, thereby setting another world record. This is the biggest funicular railway in the world for transportation of material. It even enabled the machine transformers, the heaviest individual components, to be transported their destination.

The steel pipe armour was lowered into the pressure shafts. Three pipes in each shaft were combined into one section using a robot welder. The sections with a wall thickness of up to 6 cm had to be welded manually in their final position. Four to five days were earmarked for welding a seam manually.

After being routed through the turbines in the underground power station, the water flows out into Lake Limmern via two underwater pressure tunnels, which are also cladded with passive prestressed in-situ concrete.

Largest pumped-storage power plant in Switzerland
The construction works on the Limmern Pumped Storage Power Plant are the biggest modifications in the Linthal 2015 project. They supplement the existing Linth-Limmern power plant facilities (KLL) and when fully operational will enable an increase in output from 520 MW to 1,520 MW.

The most powerful pumped-storage power plant in Switzerland has also broken financial records: with a total cost of 2.1 billion Swiss francs for «Linthal 2015» Kraftwerke Linth-Limmern issued a 200 million Swiss franc corporate bond with a maturity of 40 years, which is the longest issued on the Swiss capital market to date.
Question time

Mr Müller, the original plan was to build a rockfill dam for Lake Mutt. Why was a gravity dam ultimately constructed? The smaller footprint of the dam wall minimised land use in the conservation area. Recycling the excavated material as aggregate in the concrete for the dam wall also more or less enabled a mass balance.

The Quintner limestone layer is considered to be relatively solid. How was safety ensured in the cavern and how did the construction proceed? The two underground caverns were excavated from top to bottom. At the start of excavation, the fixed safety device and annular concrete cladding of the calotte were embedded and temporarily attached to partially prestressed bar anchors. Under the protection of the cladded calotte, benches were cut down to the bottom of the cavern in stages of up to 5 metres high. Up until the final installation of the concrete structures of the machine foundations and the lining of the cavern walls, the temporary fixing of the walls consisted of loose and partly prestressed rock anchors, reinforcement meshes and shotcrete.

What was your personal highlight of the project? The pressure shafts crossed a fault zone, the so-called Mörtalbruch. We knew beforehand about the karst cave filled with blocks and clay, but because of the covering it was not possible to probe. The geological prognosis was therefore between 20 cm and 20 metres wide. Successfully traversing the 16 metre wide Mörtalbruch without any accidents posed a particular challenge for all those involved. The breakthrough of the first pressure shaft on 14th October 2011 was therefore a special highlight for me.

«Successfully cutting through without any accidents was a highlight for me.»

Urs Müller, Bauing, ETH (Civil Engineer), Director and Chairman of the Board of IM Maggia Engineering, Locarno, Switzerland, Project Manager for the planning of the power station of the Limmern Pumped Storage Power Plant
Ilisu Dam & Hydropower Project

Ilisu Dam & Hydropower Project (1200 MW) on the River Tigris DSI State Hydraulic Works of Turkey

The Ilisu Dam & Hydroelectric Power Plant (1,200 MW) is located on the River Tigris in southeast Turkey, in Mardin District. The power plant is composed of a concrete-face rockfill dam (CFRD) with a height of 135 metres and a length of 2,289 m, gravity dam, spillway, power intakes and power tunnels (3 x Ø12/10 m), powerhouse (6 units, 1,200 MW), tailrace channel and 3 river diversion tunnels (Ø12 m) with a low-level outlet.

The design and site supervision works include:
- Concrete-face rockfill dam (H = 135 m, crest length L = 2,289 m, dam fill volume 23.5 million m$^3$, reservoir volume 10,430 hm$^3$, reservoir surface 313 km$^2$)
- Gated spillway with 3 chute channels, gravity dam and transition zone to CFRD, (spillway capacity 17,988 m$^3$/s)
- Power intake and power tunnels (Ø12/10 m)
- Open powerhouse with 6 Francis units of 222 MW each (L / H / W = 178 / 56 / 38 m)
- River diversion with 3 tunnels (Ø12/L = 1000 m, capacity 3,600 m$^3$/s)
- Switchyard (380 / 154 kV double busbar SY)

Client
Republic of Turkey, DSI, Turkish Office of State Hydraulic Works, Ankara - Turkey

Consultant
IM Maggia Engineering SA in consortium

Contractor
IC Ilisu Consortium composed of Nurol & Cengiz (Turkish Civil Contractors), Andritz Hydro (HM & EM Works)

Construction period
Final design 2007–2009
Main construction 2009–2017

Construction cost
EUR 1,600 million

Engineering services
Final design, preparation of technical specifications, review and approval of application design and site supervision as Owners Engineer

Capacity 6 x 200 MW
Design discharge 1,200 m$^3$/s
Annual energy production 4,120 GWh
General overview of Ilisu Dam & HEPP with CFRD-main dam, concrete gravity dam, spillway, power intake and tunnels, powerhouse, diversion tunnels with low-level outlet
Gotthard Base Tunnel

Construction of the longest train tunnel in the world crossing the Alps in Switzerland

The Gotthard Base Tunnel consists of two 57-km single-track tubes. With all connecting and access tunnels and all shafts considered, the tunnel system has a total length of more than 152 km. The tunnel connects the north portal in Erstfeld with the south portal in Bodio. With a depth of overlying rock of up to 2,300 metres the Gotthard Base Tunnel is not only the longest but so far also the most deeply set railway tunnel in the world.

Two multi-function stations at Faido and Sedrun divide the two tunnel tubes into three sections of approximately equal length. Here there are emergency stopping points and two track crossovers for each tube. In the event of an incident such as a fire, or if a train breaks down in the Gotthard Base Tunnel, whenever possible the train shall leave the tunnel. If this is not possible, the train driver shall stop the train at one of the emergency stopping points.

The Gotthard Base Tunnel was opened on 1 June 2016 and went into operation on schedule on 11 December 2016.

IM and IUB were involved in the design and construction supervision of the 50 Hz power supply and all cable and self-rescue systems and in the reconstruction of Amsteg Hydro Power Plant, which supplies electrical energy to the Gotthard Base Tunnel. In the design phase coordination services between shell construction and railway engineering were provided.

The construction managers of IM and IUB were also involved in the construction supervision of electrical installations in technical buildings and drainage/water supply systems as well as the integrated small hydro power plant.

IUB planned, coordinated and managed the test runs and operations with the commissioning team, ensuring implementation with a pool of almost 100 experts.

Client
AlpTransit Gotthard AG

Consultant
IM Maggia Engineering SA
IUB Engineering AG in consortium

Construction cost
CHF 12.2 billion

Construction
1999–2016

Completion
Opening ceremony 1 June 2016, Start of commercial operation by SBB (Swiss Federal Railways) 11 December 2016
Gotthard Base Tunnel
Eyholz and Visp Tunnels and Staldbach Bridges

A9 Visp South Bypass Road

The Visp South Bypass is part of the A9 road completing the national road network in the communities of Visp and Eyholz. It consists of both the Eyholz and Visp tunnels and the Staldbachbrücken bridges, which pass over the Vispa Valley and connect the two tunnels.

Eyholz Tunnel consists of two tubes, each with two lanes, with underground junctions connecting the entrance and exit tunnels with the cantonal road in the Vispa Valley. Visp Tunnel is composed of a new dual-lane tube together with the underground half junction of the national road with the Vispertäler. The existing Vispertal Tunnel will be incorporated as part of the south tube of the A9. The half junction consists of 3 underground junctions, an overpass tunnel and the existing Vispertal Tunnel as the exit to Zermatt. Cross-connections to the adjacent tube, serving as escape routes for pedestrians and vehicles are integrated into the tunnel.

Both tunnel tubes have operation and ventilation stations at the tunnel portals as well as underground technical rooms to house operation and safety system components. The new tunnel tubes have intermediate ceilings above which there is an exhaust air duct.

In the existing Vispertal Tunnel, the intermediate ceiling will be rebuilt and adapted to the new ventilation system with jet fans in the tunnel, and air will be extracted via controllable air flaps in the intermediate ceiling. An accessible service duct will be integrated into the tubes.

The tunnels cross the Rhone-Simplon fault line, which is characterised by strong tectonic stress and squeezing rock conditions. The tunnels were blasted and excavated in loose rock zones with machine-aided propulsion. In the loose rock sections, the tunnel was advanced under the protection of a pipe umbrella system.

Main technical data Eyholz Tunnel
- South tube: 4,255 m
- North tube: 4,231 m
- Entrance tunnel: 368 m
- Exit tunnel: 256 m
- South junction up to 307 m²: 443 m

Main technical data Visp Tunnel
- North tube: 2,645 m
- South tube: 922 m [new], 1,694 m [reconstruction]
- Junction I up to 307 m²: 435 m
- Junction II up to 307 m²: 241 m
- Junction III up to 307 m²: 131 m
- Overpass tunnel: 1,641 m
- Vispertäler exit: 1,224 m
- North junction up to 307 m²: 280 m

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Client
Department of Transport, Construction and Environment, Wallis Canton, Office for National Road Construction

Consultant
IUB Engineering AG in consortium

Construction period
2005-2023

Construction cost
Approx. CHF 1.2 billion
Eyholz and Visp Tunnels and Staldbach Bridges
Outlet for the River Aare
Flood protection and revitalisation of the Aare/Gürbemündung floodplain

Client
Office of Civil Engineering of Bern Canton, OIK III

Consultant
IUB Engineering AG

Duration
2006–2016

Project cost
CHF 22 million

Efficient Use of Lake Grimsel
Innertkirchen 1A Power Plant (150 MW) and Upgrade of Handeck 2 Power Plant, 90 MW

Client
KWO Kraftwerke Oberhasli AG

Consultant
IUB Engineering AG in consortium

Duration
2013–2016

Project costs
Innertkirchen 1 Project: CHF 65 million
Handeck 2 Project: CHF 65 million

Taming of the River Schächenbach on the Urner Valley Floor
Flood protection at the mouth of the River Schächen

Client
Building Department of Canton Uri, Office of Civil Engineering

Consultant
IM Maggia Engineering SA, IUB Engineering AG

Duration
2013–2017

Project cost
CHF 15 million

Lake Thun Flood Protection
Construction of a flood relief tunnel for the city of Thun, Switzerland

Client
Office of Civil Engineering of Bern Canton, OIK 1, Thun

Consultant
IUB Engineering AG in consortium

Duration
2007–2009

Project cost
CHF 53.5 million
Construction of a New Small HPP in Tomètal
Construction of small HPP Tomè, Broglio, Switzerland, 2.2 MW

Client
CEL Lavizzara SA, Prato Sornico

Consultant
IM Maggia Engineering SA

Duration
2014–2016

Project cost
CHF 8.9 million

Renewable Energy for Albania
Fangut Hydropower Plant, 65 MW

Client
Ayen Enerji AS, Tirana

Consultant
IM Maggia Engineering SA

Duration
2010–2016

Project cost
EUR 60 million

Peshqesht Albania
Peshqesht Hydropower Plant, 28 MW

Client
Ayen Enerji AS, Tirana

Consultant
IM Maggia Engineering SA

Duration
2010–2016

Project cost
EUR 120 million

The Start of Léman 2030
4th track Lausanne-Renens, southern strip – gutters and crossings

Client
Swiss Federal Railways (Chemins de fer fédéraux, CFF) – Western Region

Consultant
IUB Engineering AG

Duration
2013–2015

Project cost
CHF 28.8 million
**Solis**
Desedimentation of Solis Reservoir, Intake Structure

*Client*
Elektrizitätswerk der Stadt Zürich

*Consultant*
IUB Engineering AG

*Duration*
2010–2012

*Project cost*
CHF 19.5 million

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**Maintenance of the Simplon Pass Road**
Rehabilitation of the A9 Simplon Gallery
KAKUJO Project

*Client*
FEDRO – Federal Roads Office, Thun Branch

*Consultant*
IM Maggia Engineering SA

*Duration*
2006–2014

*Project cost*
CHF 65 million

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**Safe Passage to Grindelwald Through a New Tunnel**
BOB: straightening of the route between Zweilütschinen and Lütschinental

*Client*
BOB Berner Oberland-Bahn AG

*Consultant*
IUB Engineering AG

*Duration*
2014–2016

*Project cost*
CHF 38 million

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**Management Services and Technical Assistance to Georgian Water and Power (GWP)**
Improving operational efficiency of the utility in Tbilisi

*Client*
Georgian Water and Power

*Consultant*
IM Engineering Belgium BVBA, private financing

*Duration*
2009–2013

*Project cost*
EUR 529,000
Rehabilitation of Melide-Grancia Motorway Tunnel
Canton Ticino – N02 Motorway, EP19 Melide-Gentilino,
Complete Restoration of Melide-Grancia Gallery GC and EM
Client
FEDRO – Federal Roads Office, Bellinzona Branch
Consultant
IM Maggia Engineering SA in consortium
Duration
2006–2015
Project cost
CHF 7.5 million

Abu Dhabi International Airport – Midfield Airside Road Tunnel
Design of electrical equipment and road safety systems
Client
ADAC Planning & Development of Abu Dhabi International Airport
Consultant
IM Maggia Engineering SA as subconsultant in consortium
Duration
2014–2015
Project cost
CHF 20 million

Strategic Planning for Small Hydropower Development, Kyrgyz Republic
Assessing capacity to finance renewable energy projects
Client
Mercados EMI
Consultant
IM Engineering Belgium BVBA, EBRD financing
Duration
2009–2010
Project cost
USD 40,000

Expansion of Energy Supply in the SBB Railway Network
Leventina and Mendrisio substations
Client
SBB Energie, Zollikofen
Consultant
IM Maggia Engineering SA, IUB Engineering AG
Duration
2014–2016
Project cost
CHF 112 million

Rehabilitation of Melide-Grancia Motorway Tunnel
Canton Ticino – N02 Motorway, EP19 Melide-Gentilino,
Complete Restoration of Melide-Grancia Gallery GC and EM
Client
FEDRO – Federal Roads Office, Bellinzona Branch
Consultant
IM Maggia Engineering SA in consortium
Duration
2006–2015
Project cost
CHF 7.5 million
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