

## Urban Drainage Systems Geoinformation Systems

- Elaboration of Master Drainage Plans
- Design of real estate sewer systems
- Development and maintenance of sewage system databases (GIS)
- Development and maintenance of databases for water supply networks (GIS)
- Sewage network calculation including evaluation of aerial photography and determination of effective catchment areas
- Assessment and optimisation of storage sewers, retention basins and evacuation facilities in combined sewage systems
- Concepts and engineering design for stormwater infiltration
- Pressure pipe systems
- Hydraulic and structural engineering evaluation of sewers on the basis of inspections
- Concepts for sewer rehabilitation
- Water management planning
- Calculations of pollution load in drainage systems

## Urban Hydrology

Rainfall-Runoff (RR) modelling and long-term simulations (e.g. calculations to document sewer systems, rainwater retention areas, infiltration systems, and other special constructions)

## Hydraulics and Hydrology

- Digital altitude models
- 1D water level simulations
- 2D flow simulations
- Elaboration of Rainfall-Runoff models
- Discharge calculations, floodwater and low-water analysis
- Calculation of potential natural outflows
- Groundwater formation, groundwater levels; inter-vent analysis
- Verification of land utilisation changes

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## Floodwater Protection, Risk and Hazard Prevention

### Floodwater Protection management

- Consulting and expert appraisals for local government, federations, and state authorities for flood protection
- Elaboration of flood protection concepts (locally, regional, supraregional)
- Design and assessment of flood retention areas
- Identification of natural flow paths, endangered dyke hinterland, endangered settlements
- Combined simulations to document floodwater protection facilities
- Identification of larger areas endangered by floodwater

### Floodwater Action Plans

- Fundamental data and area representation
- Determination of inundation areas
- Determination of potential damage
- Deficits and measures
- Flood precautions

### Information and Forecasting Systems

- Information systems for floodwater protection facilities
- Information systems for buildings and dykes
- Development of online floodwater forecasting systems for river basin areas

## Risk Analysis

- Impact appraisal of a failure of flood protection measures (flood area analysis)
- Determination of potential damage, cost-benefit analysis for floodwater protection measures
- Production of flood danger maps and flow depth analysis

## Hazard Prevention Measures

- Elaboration of basic maps for evacuation planning
- Elaboration of information systems to coordinate hazard prevention measures

## Site Development and Engineering Design

- Project management
- Road design
- Pipeline design for drinking water, rainwater, sewage, drainage pipelines and rainwater infiltration installations
- Coordination of underground pipelines and cables
- Drainage systems for motorways
- Special constructions (e.g. culverts, rainwater drainage and retention facilities)
- Pumping stations and the associated pressure pipe systems





SALES

SERVICES

DEVELOPMENT



Specialists are distinguished by a special competence in their field. We need them to solve intricate and multi-faceted tasks.

Cutting-edge technology results from the fusion of profound expertise and perfect technical realisation.

The services we provide are seldom one-dimensional and the challenge of unusual problems spurs us on to break new ground. In the process, we also blaze trails that stimulate new product developments, which we then bring to production maturity. When we engage in a project, we are able to harness the long experience and specialist competence gained by the ALLSAT group of companies in the field of GNSS.

Firmly rooted in the world of practice and with our special emphasis on ongoing development, we have earned

ourselves a reputation for outstanding quality both at home and abroad. Our clients throughout the world have come to value the comprehensive service we offer, a service that gives them everything they need from a single source: data acquisition, analysis, calculation and evaluation, planning and development.

With our innovative strength and know-how, we provide our clients with the security of knowing that their projects and assignments will always find modern and individual solutions.

The ALLSAT team sets the highest standards where service is concerned – with comprehensive advice and assistance, intensive support and guidance, continuous attention to detail, and that special kind of motivation that comes from enjoying our work.

The ALLSAT team stands for comprehensive services in all fields of GNSS technology based on the 3 Pillars of ALLSAT.

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Service Spectrum

- Urban Drainage Systems
- Urban Hydrology
- Hydraulics
- Flood Protection
- Site Development and Engineering Design

- Basic evaluation
- Preliminary design
- Concept design
- Approval design
- Implementation design
- Preparation for commissions
- Collaboration in the award of contracts
- Studies and analyses
- Special services on request

W A T E R M A N A G E M E N T

CLIENT - F O C U S S E D

