

Datasheet of the IKTA4/113 project

I. Wastewater treatment expert system

Project start: April 1, 2002, duration: 18 months.

Amount of support: KHUF 34 000, total project cost: KHUF 68 000.

Project leader: **Kárpáti Árpád Dr.**

Veszprémi Egyetem Környezetmérnöki és Kémiai Technológia Tanszék

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Project URL: <<http://water.sol.vein.hu>>

II. Consortium members (number of members = 2, the first member is the project co-ordinator)

<i>no</i>	<i>name</i>	<i>support</i>	<i>total cost</i>
1.	University of Veszprém, Dept. of Environmental Technologies	KHUF 16 500	KHUF 33 000
2.	EuroTrend Informatics Ltd.	KHUF 17 500	KHUF 35 000

III. Public presentations

No presentation is available.

IV. Goals of the project

The primary aim for the project is to make a complex expert system and database for optimisation of operation and developing the municipal sewage treatment in Hungary. According to the requirements the system has to be able to calculate the cost of construction and that of the operation for the different technologies preliminary. For most of the technologies used for sewage treatment it will be able to simulate the quality of the effluent and treatment capacities as well. It will be able to optimise the running cost with simultaneous fulfilling the requirements of the recipient water flows.

It will help to work of the self-governments and responsible authorities and Ministries in developing the Hungarian wastewater treatment capacities, which is necessary to accessing the EU.

Approximately 60-70% of the construction has to be release to that is founded by the central budget. Only the rest has to be financed by the populations. This is why the cost of investment, has to be controlled very carefully by the authorities and the administrations of the Ministries. The operational cost on the other hand always has to be paid by the user of the water.

The expertise necessary to evaluate the proposals of the designers and the constructors of the sewage treatment and choose the best one for the community - self-governmental level - in most of the cases is lacking. This is why the guaranty of the investors for the quality of the treated effluent is frequently lost. The reason is mainly the bad contract. In spite of that specific operational cost may raise to unrealistic range. The expert system would like to help the investors to optimise choosing the technologies with careful consideration both the constructing and the operational costs. This can result in considerable savings for both of the sides.

On the base of the dynamic simulation of the wastewater treatment processes the expert system will be able to optimise the operation of the working unites as well. This is a possibility to get below the limit values of the recipient. On the other hand the simulation can prove the necessity of retrofitting and upgrading the operating units. Choosing the optimum in cost and safety for the decision-makers of the population and the region authorities permitting the reconstruction and Ministries redistributing the governmental funds will also be more easier with the help of the expert system in the future than it is nowadays.

V. Project results (in case of finished projects)

The project is not finished.

VI. Data on consortium members (number of members = 2)

1. *University of Veszprém, Dept. of Environmental Technologies* (co-ordinator)

URL: <<http://water.sol.vein.hu>>

Support for the co-ordinator: KHUF 16 500, and its total cost: KHUF 33 000.

Contract number: .

Team leader: **Kárpáti Árpád Dr.**

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2. *EuroTrend Informatics Ltd.*

URL: <<http://www.eurotrend.hu>>

Support for the consortium member: KHUF 17 500, and its total cost: KHUF 35 000.

Contract number: .

Team leader: **Révész Ádám**

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