

## THE ROLE OF R&D LABORATORY IN ENVIRONMENTAL TECHNOLOGIES

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Recently, the environment has become an important area for so called eco-industry. The target of its activities may be characterized as an effort to improve the quality of environment by force of chemical, physical, and biological tools (clean-up methods). Especially biological methods have been playing increasing role which gains strength. Innovation is one of the most important factors that contribute to the economic growth. Nonetheless, the gain of the competitive advantage is the main motivation from the business point of view.

This paper explains the concept of R&D laboratory in environmental service as a competitive force and a tool of competitive advantage. The practical effect of all activities, which are carried out in the R&D laboratory, is illustrated using particular case studies. They are intent on 5 fundamental spheres of research and development: (1) microbial analysis of the contaminated area; (2) screening of the microorganisms in order to find the suitable strain + bioremediation potential assessment (in autochthonous and allochthonous); (3) characterization of physiological, metabolic, and ecologic properties of selected strains; (4) construction of the biological technology (tailor-made), decision about biostimulation, bioaugmentation or managed natural attenuation; (5) consulting in technical microbiology with the basic laboratory service (overview of methods).

Finally, this contribution reveals how a modern company of eco-industry works. The relationships among particular parts are based on the communication and mutual support. In case of this text, the interaction among *ex-situ* subsidiary, *in-situ* subsidiary, anaerobic digestion plant, and R&D laboratory is briefly depicted. Environmental service as an industrial organization offers powerful tools and effective methods for environmental clean-up. Biological part of technological platform (thanks to its flexibility, naturalness, and regard for nature) afford an economically suitable way how to improve the state of environment

