



TECHNISCHE  
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IWAR

# SEMICENTRALIZED SYSTEMS

## Raising Water & Energy Efficiency

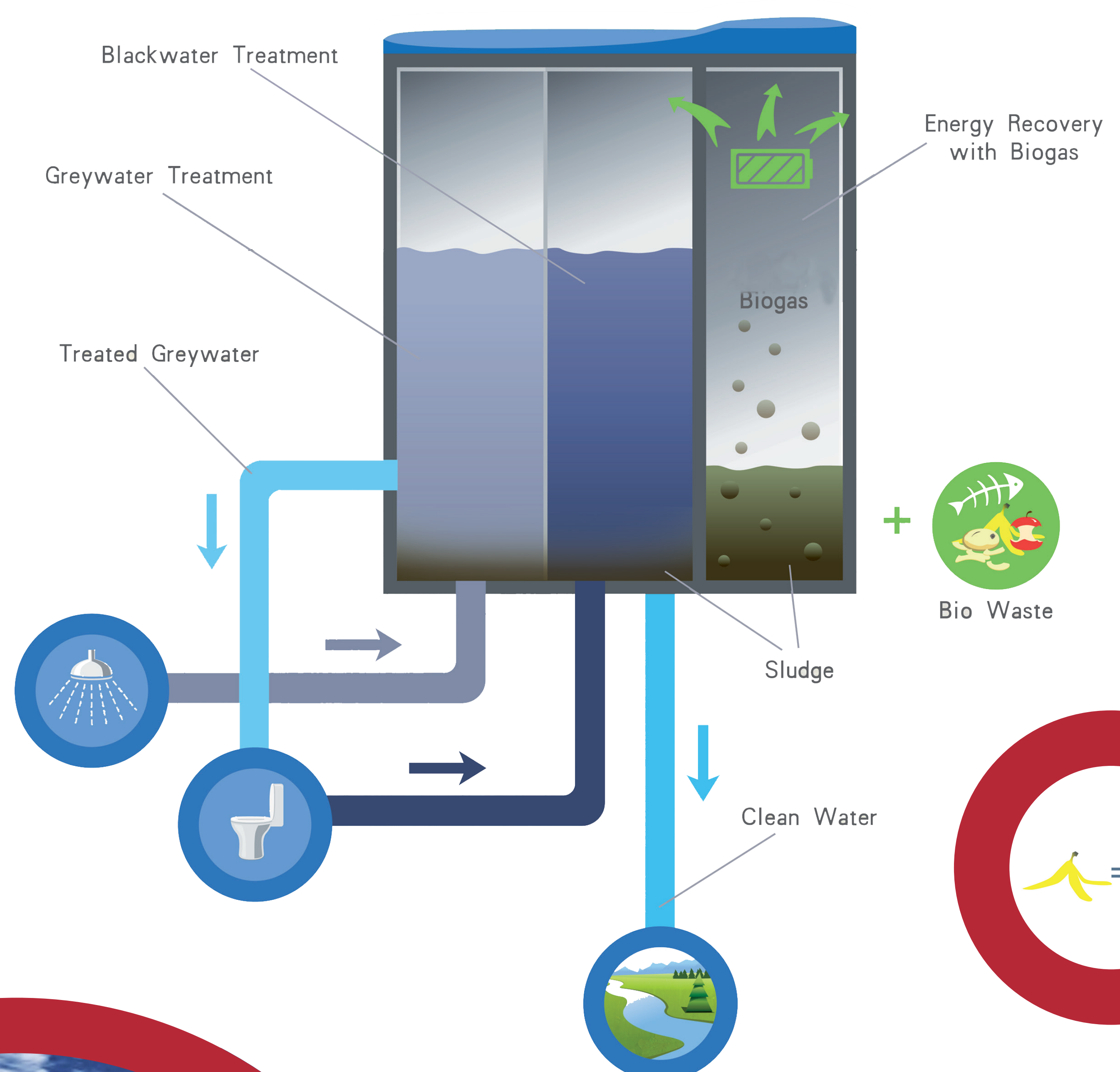
### Water Reuse within "Semizentral"

Wastewater contains a valuable resource in concentrations of more than 99.5 % – water. Thus, water reuse is an essential component of integrated water resource management, not only in arid and in water deficient areas, but increasingly also in densely populated urban areas, where water demand and supply diverge widely.

Intra-urban reuse of water for utilizations which do not require drinking water quality offers a high potential to save valuable water resources and reduce wastewater discharge.

However, water reuse requires the transition from conventional, centralized to nodal, semicentralized supply and treatment systems with short distances from the firsthand user to the treatment units and back to the secondhand reuse.

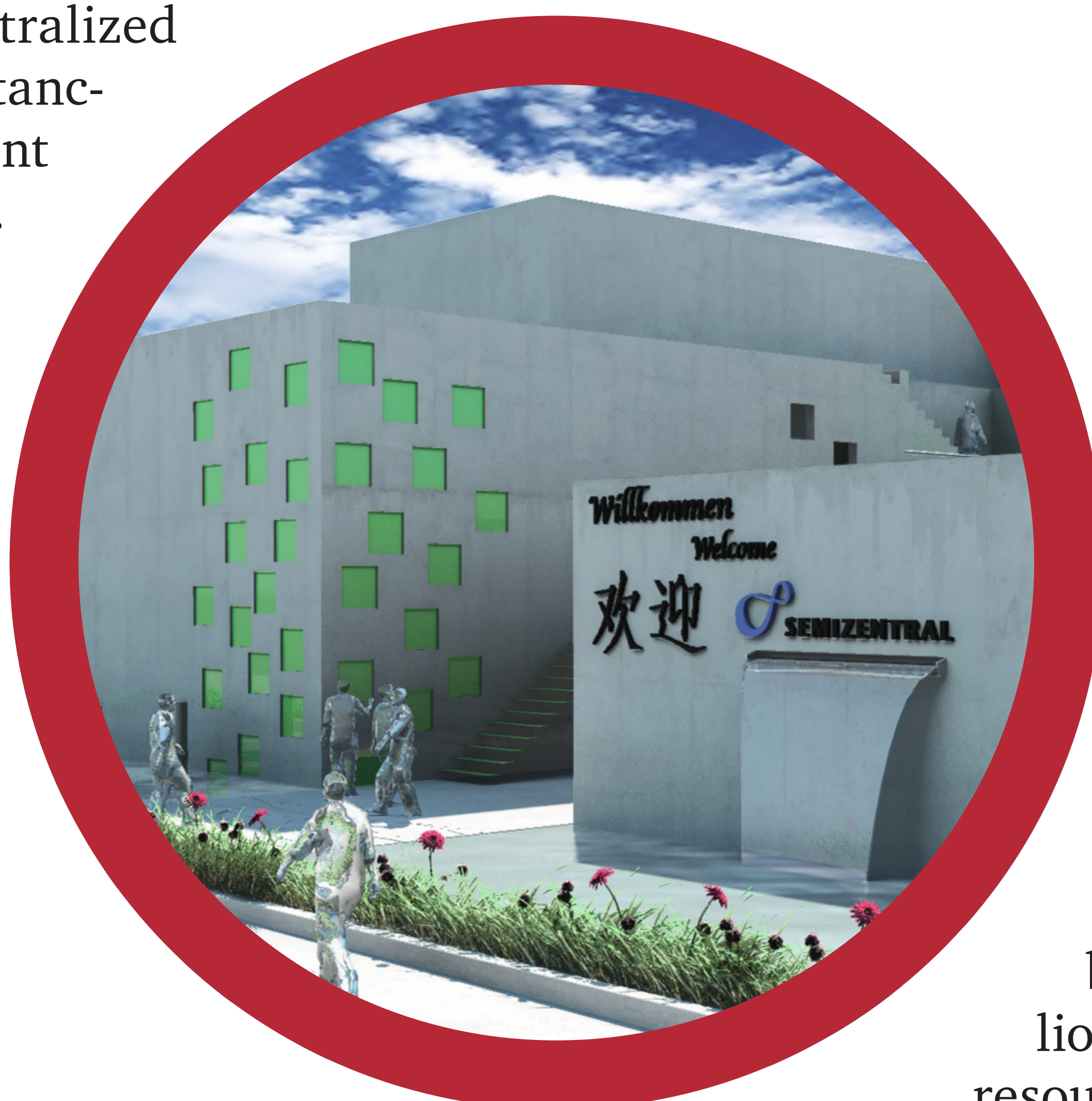
By reusing adequately treated water, the demand of potable water could be reduced by 30 %. Additionally, the amount of wastewater to be discharged can decrease by the same proportion. Intra-urban water reuse not only preserves valuable water resources and is more cost-effective but – in combination with biogas recovery – is also more energy-efficient.



### Implementation at WHE Qingdao 2014

Qingdao, a vigorous city with the population about 7.6 million, is a typical emerging metropolis at the coast of Shandong province in China. The "World Horticulture Exposition", which is celebrated as the "Olympics" in the international horticultural community, will be held in Qingdao in 2014. The half-a-year (May to October 2014) exhibition period will attract at least 12 million visitors. SEMIZENTRAL, as a pioneer of resource-efficient infrastructures in

cities, will be implemented firstly in the new development area of WHE in Qingdao to serve about 12,000 residents. The SEMIZENTRAL approach will display a flexible, resource-saving and energy self-sufficient supply and treatment solution for the future. It will be together with the spectacular WHE to promote Qingdao's development and improve the Qingdaoers' quality of life.



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