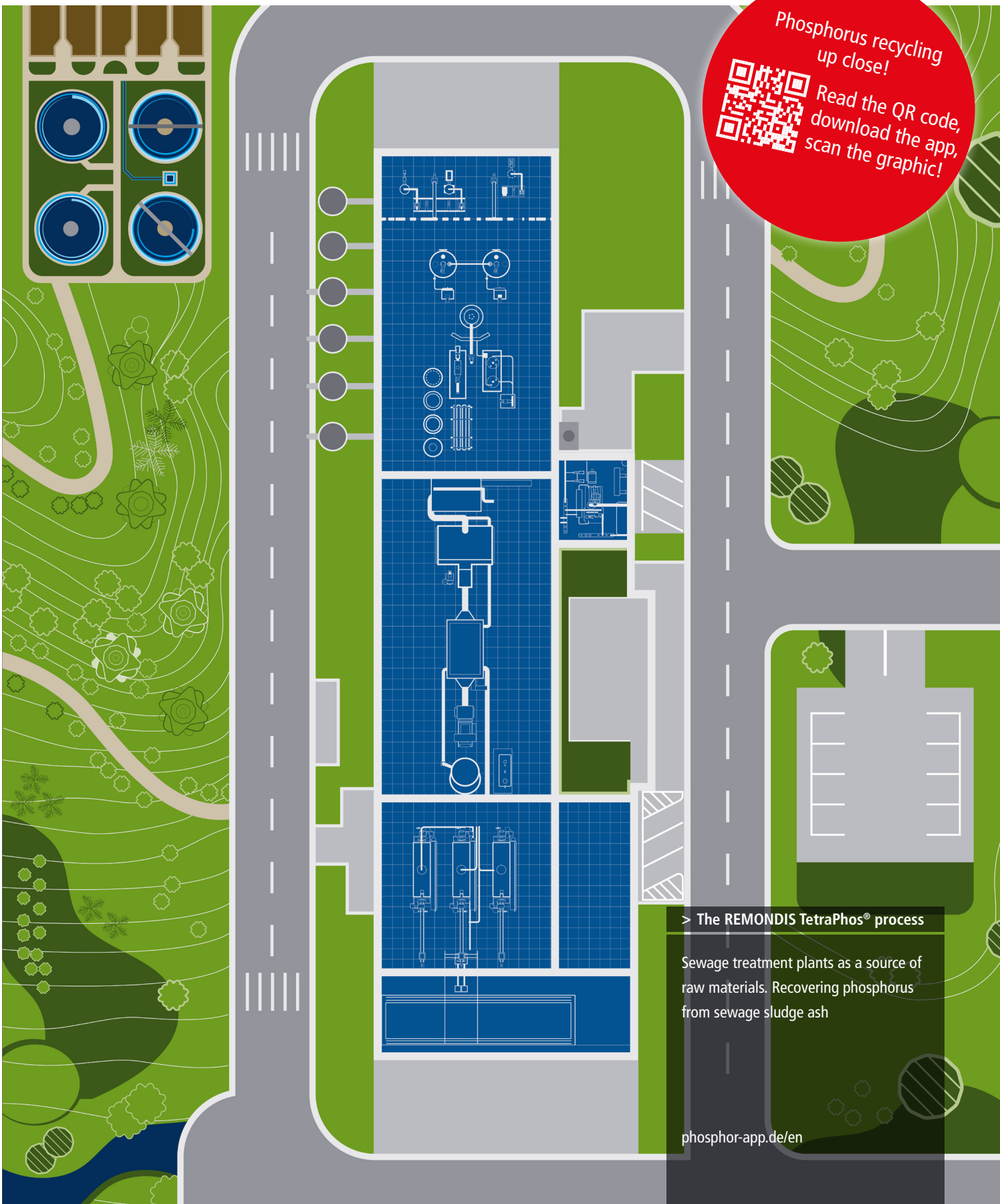
REMONDIS®

WORKING FOR THE FUTURE

The REMONDIS TetraPhos® process. Recovering phosphorus to protect our future



> The REMONDIS TetraPhos® process

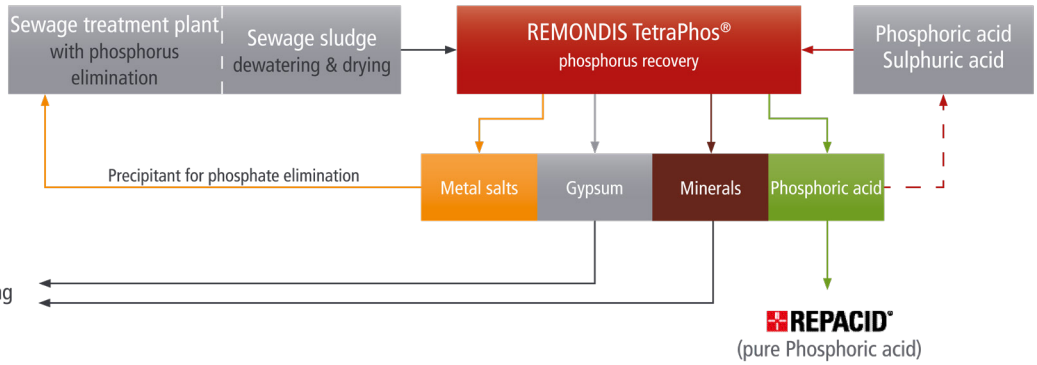
Sewage treatment plants as a source of raw materials. Recovering phosphorus from sewage sludge ash

phosphor-app.de/en

New ways to conserve natural resources. Recovering phosphorus protects our future

Phosphorus is a nutrient that is vital for all living organisms on earth. Practically all of Europe's phosphorus has to be imported and it is becoming more and more difficult to supply our agricultural and industrial sectors with this valuable substance as natural reserves are gradually becoming depleted and the quality of the raw material is deteriorating. REMONDIS' TetraPhos® process is making a major contribution towards conserving our planet's natural resources and protecting the environment.

The TetraPhos® process is like a puzzle piece that fits perfectly into the nutrient cycle – fully and sustainably closing the phosphorus cycle for the very first time



Helping to conserve our planet's natural resources: REMONDIS' patented TetraPhos® process.

Municipal sewage treatment plants as a source of raw materials – REMONDIS' TetraPhos® process

Our philosophy: sewage treatment plants are not places for simply disposing of a waste product but for recovering clean water, energy and minerals. Thanks to REMONDIS' services and systems, waste water can be treated, sewage sludge used as a source of recyclable materials and energy and valuable salts recovered from the ash – primarily by deploying the TetraPhos® system, a process developed by REMONDIS Aqua.

Moving towards the future with a cost-effective and resource-friendly system

Phosphorus must be recovered from municipal sewage sludge in Germany from 2029 onwards. The TetraPhos® process, a phosphorus recycling system, already meets the new rules and regulations that will be coming into force, making it a future-proof investment. This physical-chemical process recovers several kinds of marketable secondary raw materials – all of which can be returned to production cycles, are permanently available and always of the same high quality. These include phosphorus, a resource vital for all life (whereby the recovered phosphoric acid, REPACID®, is of a higher quality than the raw material from natural resources), iron and aluminium salts, which can be used to eliminate phosphates at the sewage treatment plant, and gypsum and minerals for the building supplies industry.

Main advantages

Cost effective: when used at conventional municipal sewage treatment plants, this process is so economical that it does not create any additional costs. In fact, if the parameters are just right, it can cut costs.

Legally compliant: way over 80% of the phosphorus is recovered from the ash, which more than satisfies the targets set out in the amendment of the Federal Sewage Sludge Ordinance [AbfKlärV] – making it a future-proof system.

Improved carbon footprint: several product life cycles are closed and high-quality secondary raw materials produced. Moreover, the REPACID® production process cuts carbon emissions by 60% compared to imported phosphoric acid – giving it an excellent environmental footprint.

Nutrients and pollutants safely separated: the phosphoric acid is a standard and fully marketable secondary raw mater-ial – there are no restrictions.

Download the app with the QR code on the front, scan the graphic and discover phosphorus recycling up-close

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