Why does the world need a new SCM?
Portland cement is responsible for 5-7% of global carbon emissions.
An established and easy way to improve the environmental performance of concrete is to replace part of the cement content with a Supplementary Cementitious Material (SCM) that has a lower CO₂ footprint than Portland cement.

However, the supply of high quality SCMs is currently insufficient and continues to decline. For example, fly ash, a by-product of burning coal in power plants, has successfully been used as an SCM for decades but due to the closure or conversion of coal- to gas-fired plants, and the use of different types of coal, fly ash suitable for use in concrete is rapidly decreasing in supply.

What is OPUS SCM™?
Terra is proud to introduce OPUS SCM™: an engineered SCM, that can be locally manufactured and fill the fly ash void. OPUS SCM™ offsets the use of Portland Cement in the 10-25% range for most common concrete mix designs, without sacrificing concrete performance. Terra is currently engaging in select commercial demonstration projects across the nation.

What are the benefits of OPUS SCM™?
1. **Low carbon emissions.** OPUS is made from silicate rock types that have little to no embodied CO₂, as opposed to Portland cement which is made from limestone that has over 40% embodied CO₂. For every ton of traditional Portland cement that OPUS SCM™ displaces, 70% reduction in CO₂ can be realized. In the future, as favorable, renewable energy sources become more economical and scalable, OPUS will achieve zero carbon emissions.
2. **Low NOx emissions.** NOx emissions will be controlled and for every ton of Portland cement replaced by OPUS, up to 90% reduction in NOx emissions can be expected.
3. **Scalable technology & globally available feedstocks.** Terra’s technology is highly scalable and our feedstock, silicate rocks, are the most abundant rock type on earth, a major advantage over other technologies that are constrained to one specific feedstock type.
4. **Cost competitiveness.** Terra delivers cost competitive solutions before green and/or government incentives.
5. **Certified.** Terra’s materials & technology have been broadly tested and verified by 3rd party certified independent labs. **Concrete with OPUS SCM™ meets all applicable performance requirements.**
6. **Using existing infrastructure.** OPUS SCM™ functions well within existing concrete infrastructure.
7. **Low transport cost.** Terra plants sit on small footprints allowing OPUS SCM™ to be produced close to core markets, greatly reducing transportation logistics and costs.
8. **No coal.** OPUS SCM™ is not a by-product of burning coal.

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