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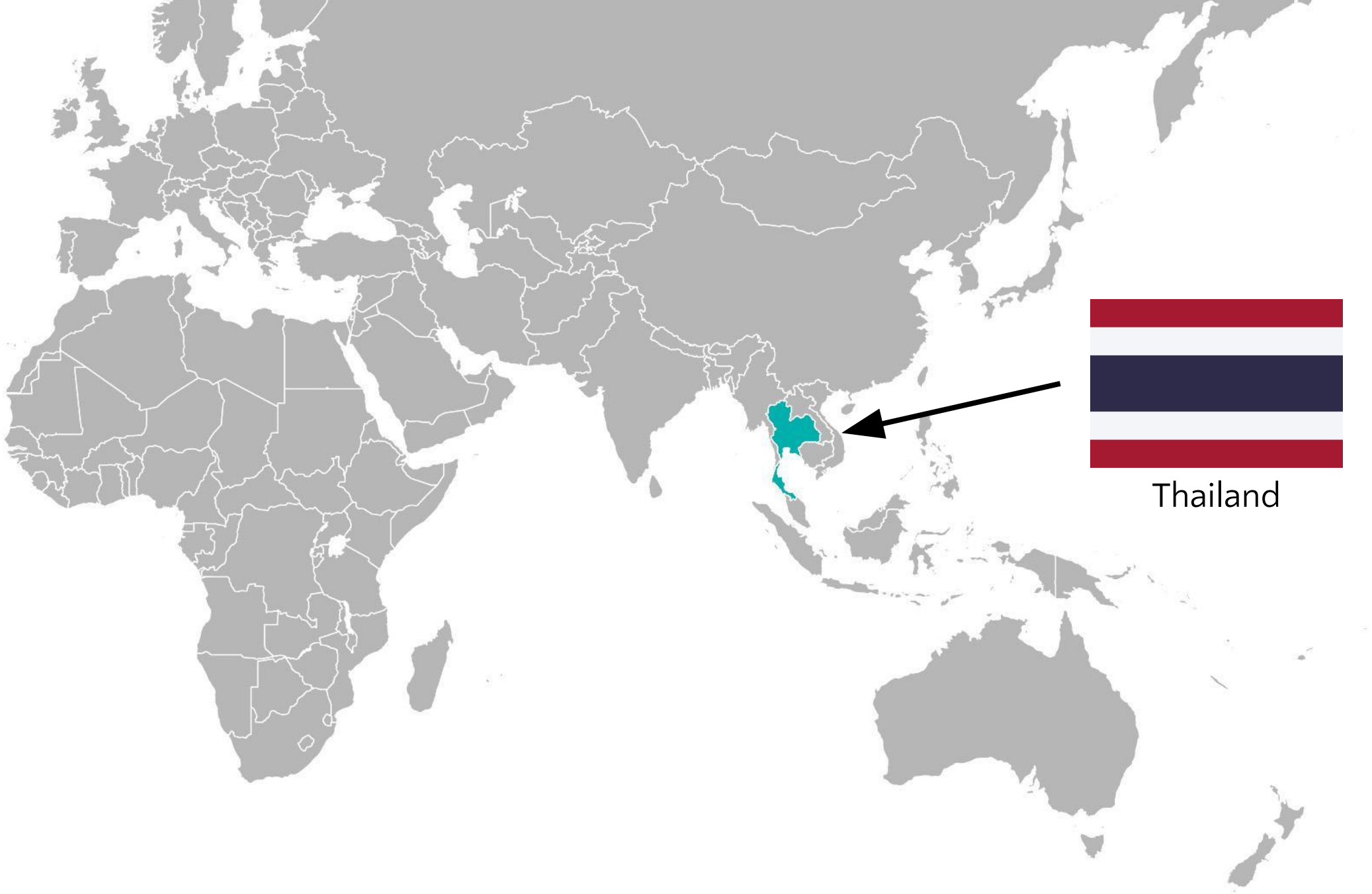
Technology Introduction


Thailand

Buddhist Temple Park, Thailand

Buddhist Temple Park

Phutthamonthon, Thailand

Status: Operational since July 2020

Restroom:

- 48 x pedestal toilets
- 14 x male urinals

- 12 hours p/day
- Public
- High load

Technology setup:

- 10 x Aquonic 600 tank – treating overflow effluent from 20,000L septic tank

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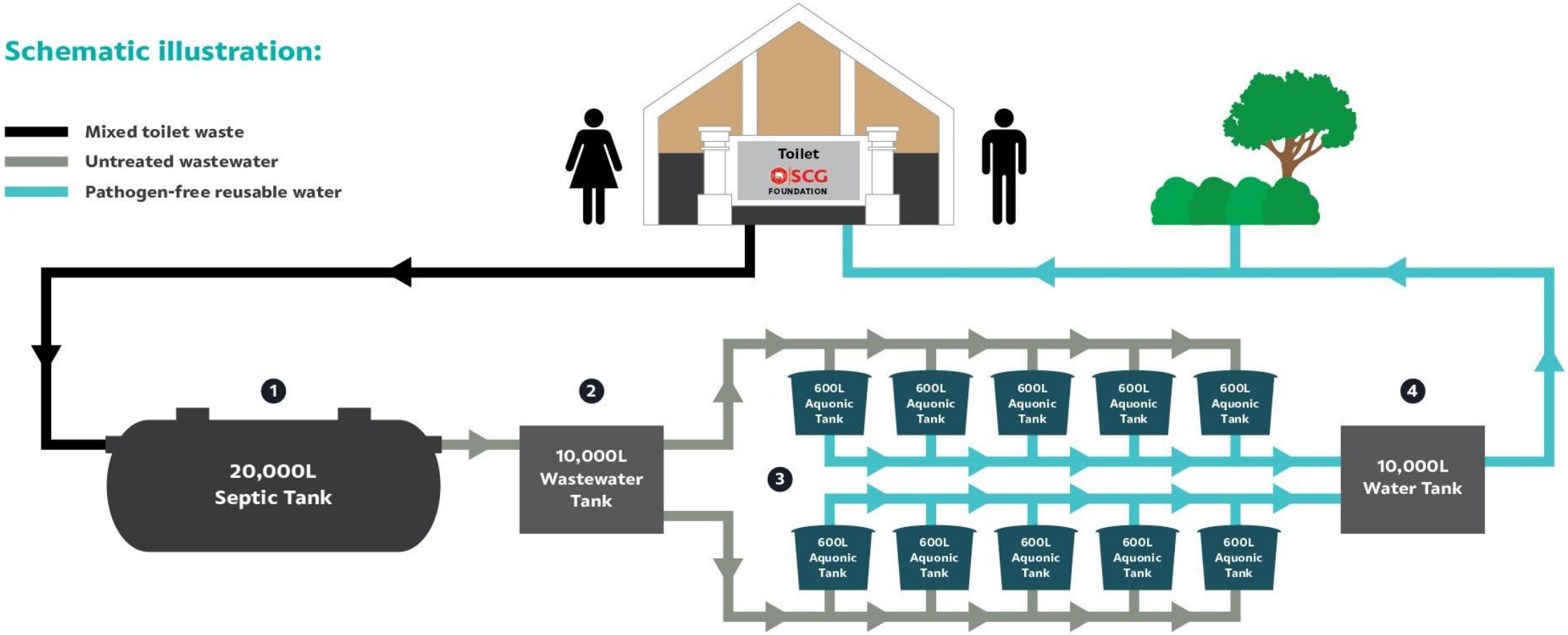
Schematic illustration:



How the system works:

1. Toilet waste is flushed to a standard septic tank.
2. Over-flow untreated wastewater accumulates in a separate buffer tank.
3. The wastewater is pumped to 10 x Aquonic 600 tanks for treatment.
4. The treated, reusable, pathogen-free water is stored in tank before being pumped out for flushing men's urinals and irrigation.

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How to Calculate Number of Required Aquonic

Basic idea - Calculate for the maximum generation of wastewater per site

Info required

1) Number of toilet cubicle – e.g. 5
2) Volume of the toilet flush or pour – e.g. 6L
3) Number of hours per day the toilet is open for use – e.g. 8h
4) Number of days per week the toilet is open for use – e.g. 5 days

Assumptions

1. Use assumption that 1 person use toilet for 10min and flushes twice
2. Use assumption that 1 x Aquonic can treat 1000L per day, 7 days per week

Example calculation

Max wastewater per day for 1 toilet cubicle
= 6L x 2 x 6 x 8 = 576L

Max wastewater for toilet block per week
= 576L x 5 cubicle = 2,880L x 5 days = 14,400

Required Aquonic tanks =
14,400 ÷ 7 days = 2,057L per day ÷ 1000L = 2 Aquonic

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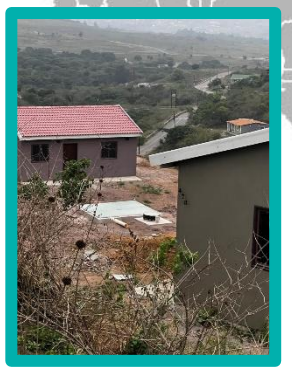

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Act Local

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