Do IoT Fieldlab
Innovation in Internet of Things

HORTICULTURE

Tomatoworld

Tomatoworld is a real horticultural tomato production environment where you can deploy and test sensors, automation and IoT devices among a living crop. Glass, steel and a dense canopy make wireless hard in a greenhouse, which is exactly why we test here. Our approach is technology neutral: we help you find the connectivity that fits your solution, private 5G or otherwise.

3850 MHz 5G, band n77	**100 MHz** bandwidth, TDD	**2 radios** indoor, 4x4 MIMO	**Real crop** working greenhouse

Network specifications

Parameter	Specification
Environment	Working demonstration greenhouse with a real tomato crop, glass and steel structure
Technology	Private 5G, TDD
Licensed frequency	3800 to 3900 MHz (band n77, centre 3850 MHz), experimental licence
Radio	2 indoor radios with 0 dBi antennas, 4 x -6 dBW e.i.r.p. (MIMO) per radio
Compute	Per test plan
Programme	Built in the Do IoT for Greenhouse Horticulture project (2023 to 2025) with MRDH, Province of Zuid-Holland and Westland

Typical use cases

Insect-detecting drones	Moisture sensing for precise watering	Crop and harvest robotics
Climate and plant sensors	Camera and vision streams	Crate and trolley tracking