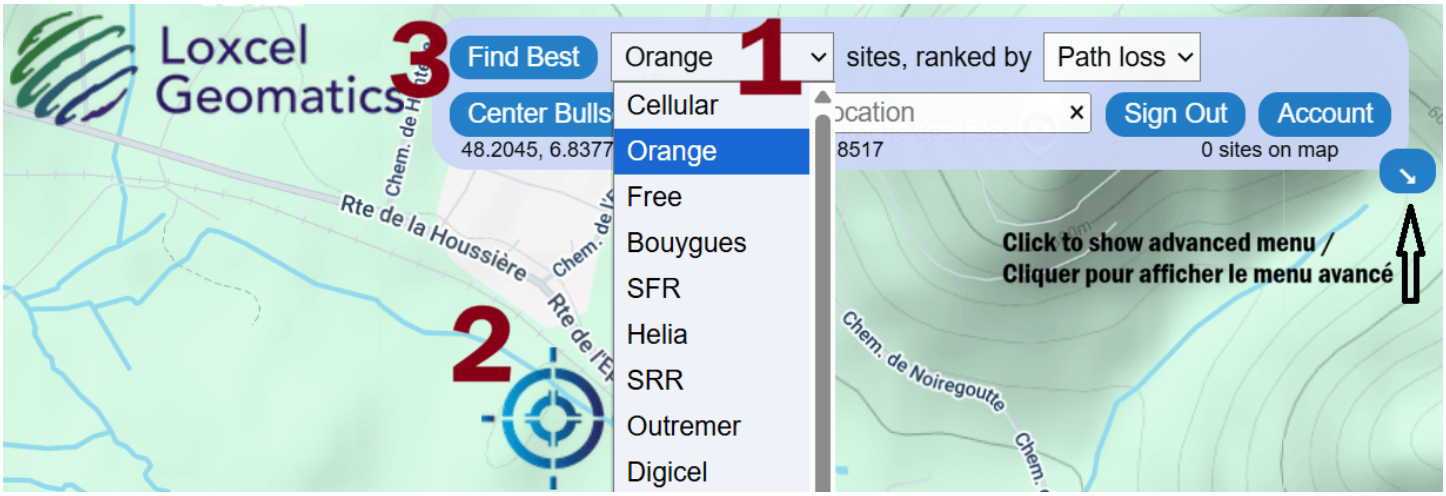
Loxcel Cellular Services — Quick Start Guide (France)

Purpose

Loxcel Cellular Services identifies optimal cellular sites for signal boosters, fixed wireless, or IoT endpoints using ANFR spectrum data, terrain, and RF parameters to compute path loss and verify LOS/Fresnel clearance.

Accessing the Tool

Log in at `loxcel.com/celltower-fr`. You'll see a map-based UI with filters, map controls, and overlays for cellular sites / towers:



Site Selection Workflow

Step 1 – Apply Filter. Use a filter to narrow results by:

- Carrier: Orange, Free, Bouygues, SFR, etc.
- Band: 700 MHz, 800 MHz, 900 MHz, 1.8 GHz, etc.

Step 2 – Set Location

Position the bullseye over the target deployment site. If it's missing, click ***Center Bullseye*** to reset.

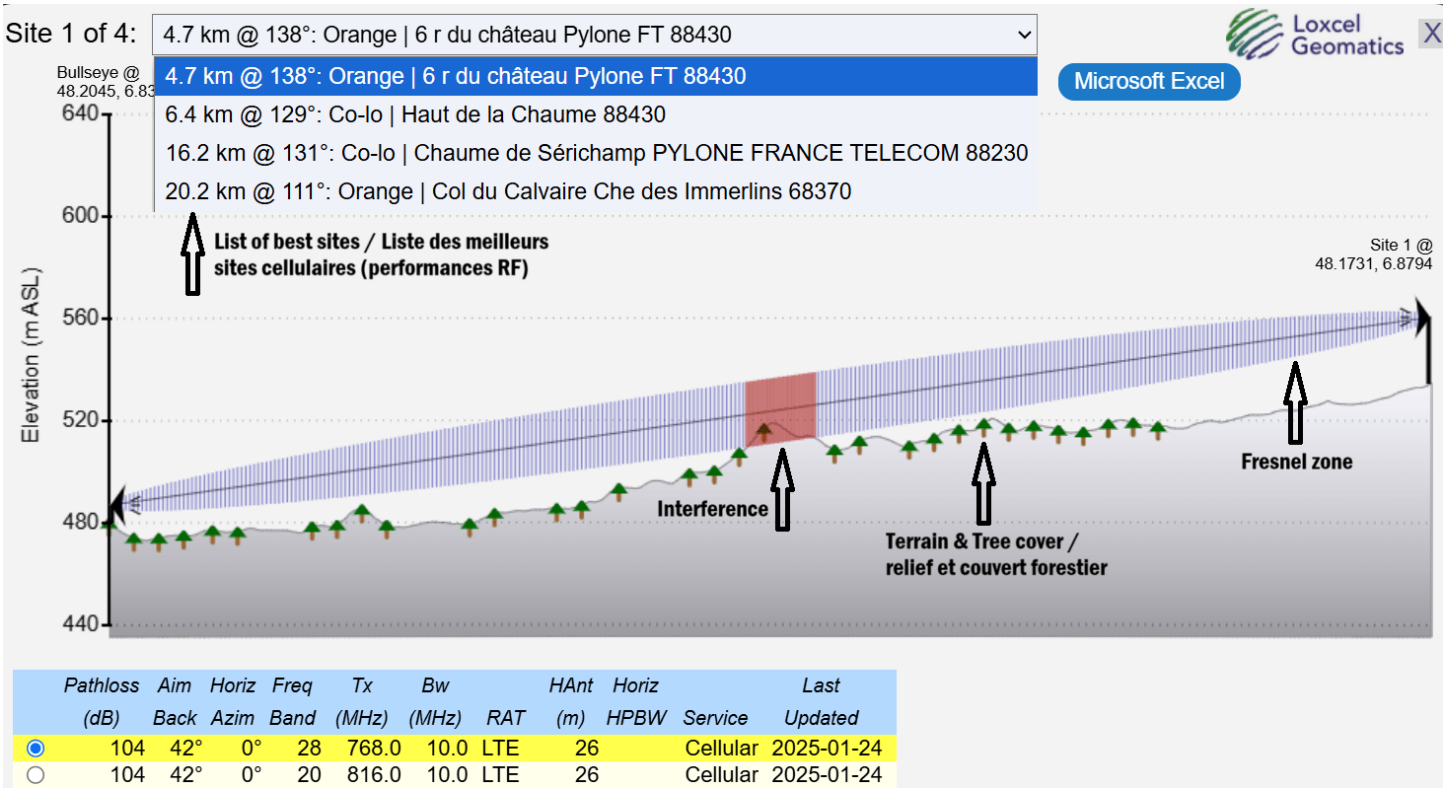
Step 3 – Click '*Find Best*'

The tool searches outward from the bullseye and returns viable sites:

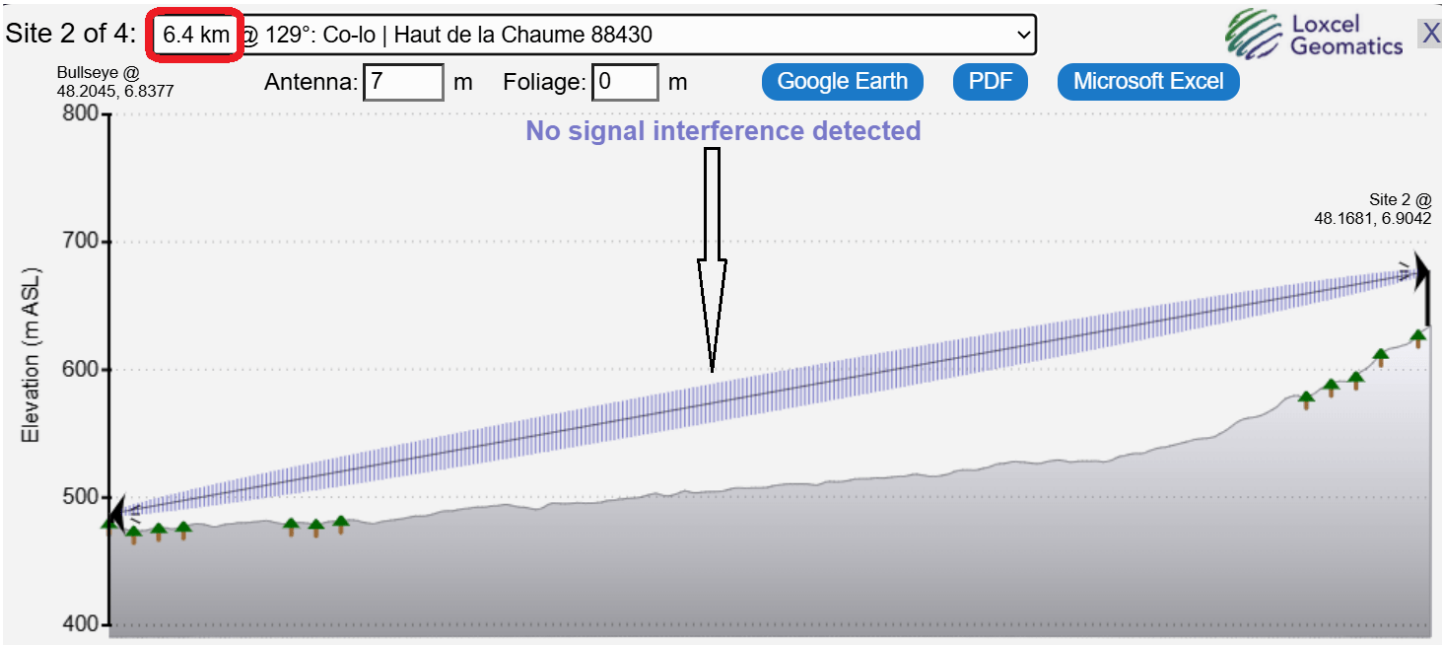
- Filters out sites obstructed by terrain, based on user-selected line-of-sight (**LOS) or Fresnel-zone** clearance (set in advanced menu)
- Ranks candidates by estimated **path loss** or **distance**, depending on user preference.

Example Output

4 Orange sites found within 4.7 to 20.2 km of the bullseye:



Proximity doesn't guarantee quality. Fresnel-zone obstruction can degrade performance more than additional distance.



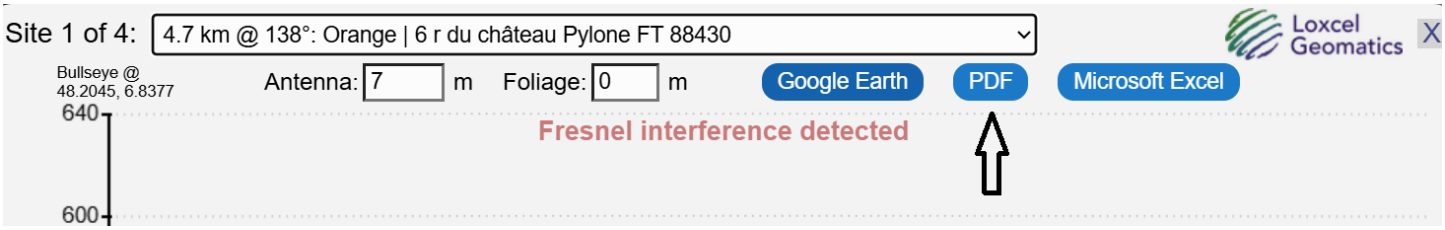
Key Principle (to consider when reviewing results):

Fresnel or LOS obstruction increases path loss and can introduce multipath, degrading reliability ***even with high RSSI****.*

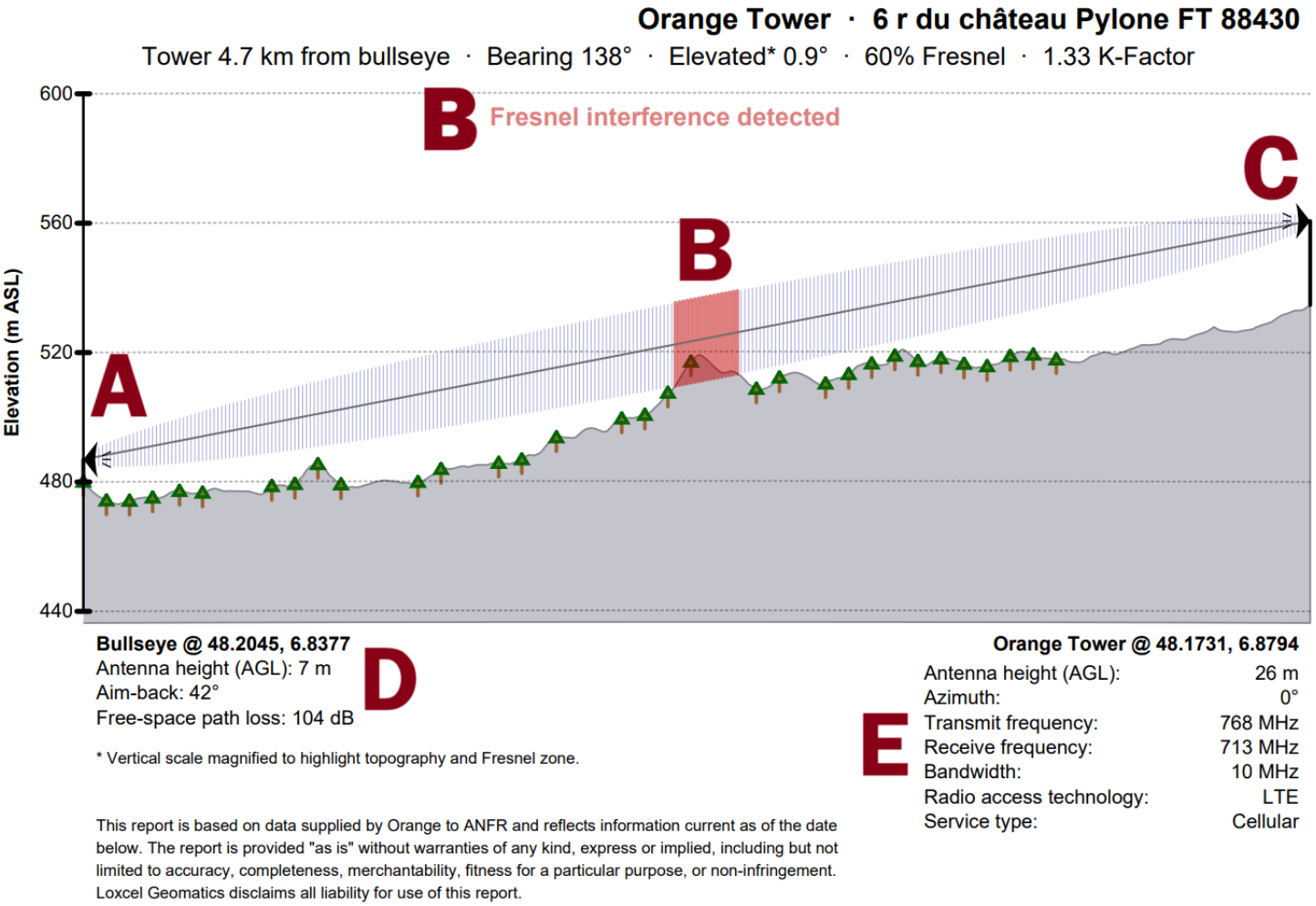
Export PDF Site Survey

Click *PDF* to generate a technical summary showing:

- RF line profile
- Obstruction analysis
- Path loss estimate
- Site and client-end antenna details



The PDF is useful for installation planning and documentation:



Label	Description
A	Customer site (bullseye location)
B	Terrain interference status bar: No interference, Fresnel interference or LOS obstruction

C	Selected cellular site
D	Customer-side parameters: 1. Antenna height (AGL, m) — editable 2. Aim-back angle from tower azimuth (°) – lower is better 3. Free-space path loss (FSPL) — excludes obstruction penalties
E	Cellular site parameters: 1. Antenna height (AGL, m) 2. Azimuth (bearing, °) 3. Frequency: 768 MHz (Tx), 713 MHz (Rx) 4. Bandwidth: 10 MHz — 5 MHz suits IoT, 40 MHz preferred for broadband

