

EMF authorisation process in Switzerland

23 September 2025, André Trabold



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Legal framework

The [Environmental Protection Act \(EPA\)](#) defines the limiting exposure

- neither harmful nor detrimental to well-being
- based on current scientific knowledge, experience, including particularly sensitive groups

➤ The [Ordinance on Protection from Non-Ionising Radiation \(ONIR\)](#)

- Scope: stationary installations such as power lines, railways, mobile phone stations and radio transmitters
- Limitation of emissions to the extent that this is a) technically possible, b) operationally possible and c) economically acceptable.
- **Protection: exposure limits** - ICNIRP reference levels incorporated into the ONIR
- **Precautionary principle: installation limits** in places where people are permanently present.



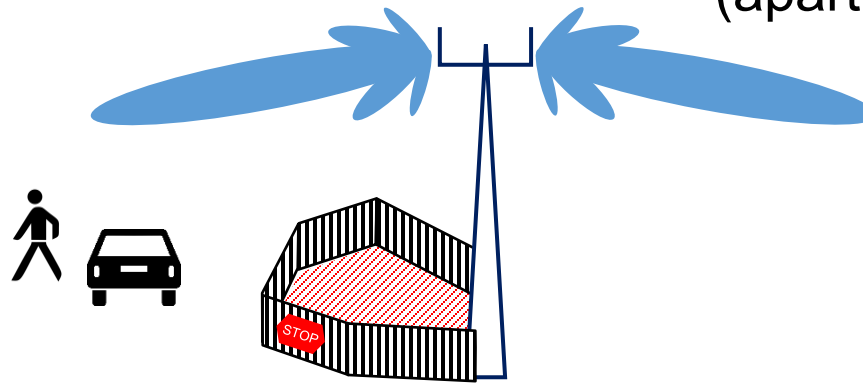
Limit values

The ONIR limits the exposure from electric and magnetic fields with frequencies from 0 Hz to 300 GHz generated during the operation of stationary installations:

Exposure Limit Values (ICNIRP)
in publicly accessible places:

Installation Limit Values ($\sim 1/10$ ICNIRP)
at Places of Sensitive Use PSU
(apartment, school, workplace, etc.):

IGW (~ 50 V/m)



AGW (~ 5 V/m)

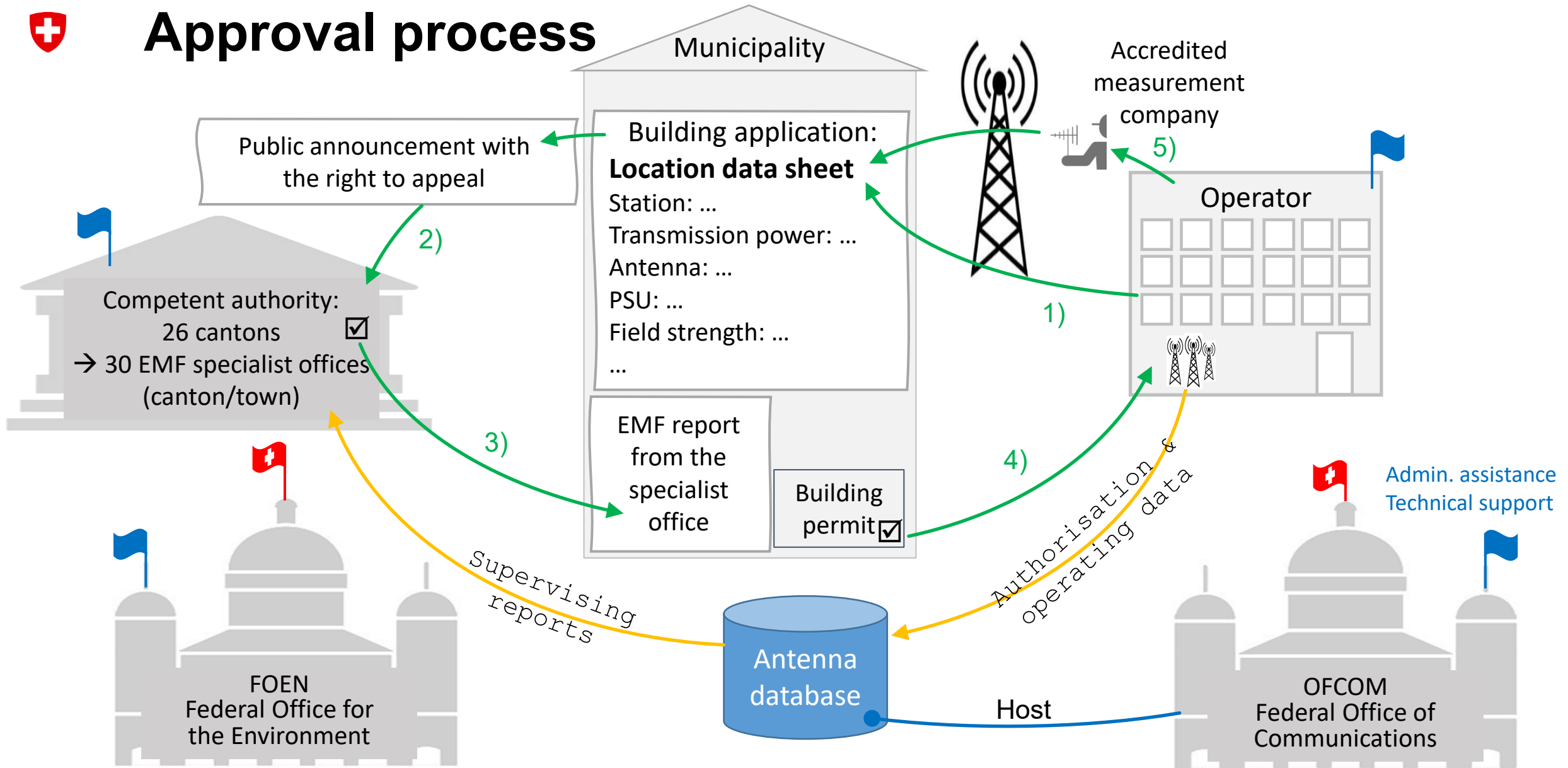
Summation rule:

$$E = \sqrt{\sum E_{BAND}^2} \quad E_{BAND} = \frac{7}{d} \cdot \sqrt{\frac{P_{ERP}}{\text{attenuation (orientation, structure)}}}$$

Challenge:
EMF budget



Approval process



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