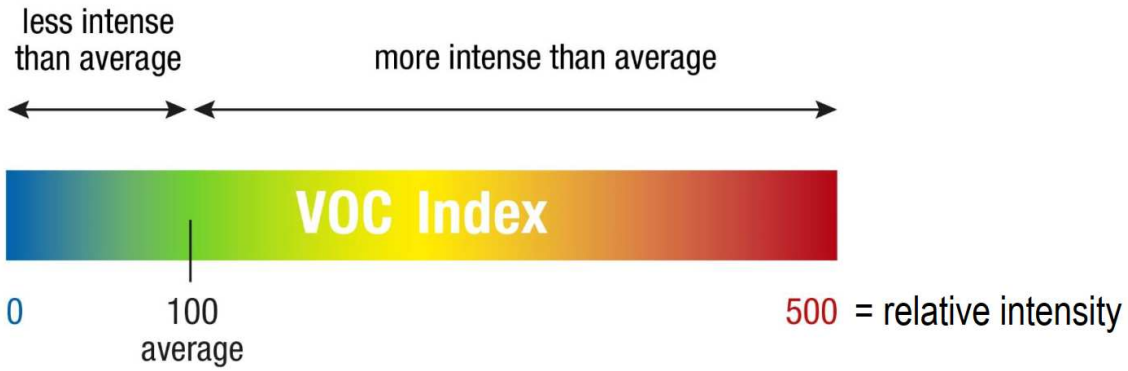
How to Sell the Value of the VOC Index (1/2)

How intense?



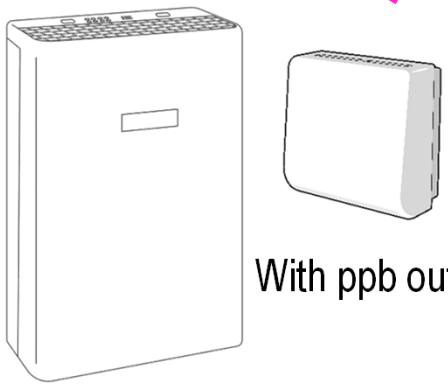
VOC Index…

- …shows **changes** of intensity **relative** to the history in the room
- …is referenced to the **average of VOCs** present over the last 24h in the room
- …behaves similar to a human nose, a MOX sensor is not able to detect the absolute VOC concentration
- …adapts automatically in case the constant background VOC level has changed (*e.g. transferring the device into a new room*)

How to Sell the Value of the VOC Index (2/2)

Why Absolute Ppb tVOC Sensing does not work

Fantasy product



With ppb output

Requirements	Reality
▪ Concept: a gas concentration output must be well-defined by one specific gas or a mixture with fixed composition	▪ TVOC is not one specific gas, but the sum of hundreds of different VOCs which are constantly varying in indoor air environments; a sum can only be measured when all individual components are analyzed, *e.g.* by a GC-MS ▪ TVOC standards clearly state that there is no such method which can evaluate standard levels by a single-value analytical tool such as a MOX resistance ▪ A MOX sensor output is unspecific and does not allow for direct correlation with bad air quality: 1,000 ppb tVOC on Monday is not the same as 1,000 ppb on Friday
▪ Sensor: calibration parameters must remain constant over lifetime	▪ Cannot be guaranteed and hence leads to false readings & horrible d2d in the field
▪ Use case: end user must accept to live in a "red-level" if his environment has constant high tVOC background	▪ End users complain about device; user experience is bad

Therefore, currently no single-signal MOX sensor is capable of measuring accurately and give useful absolute ppb data