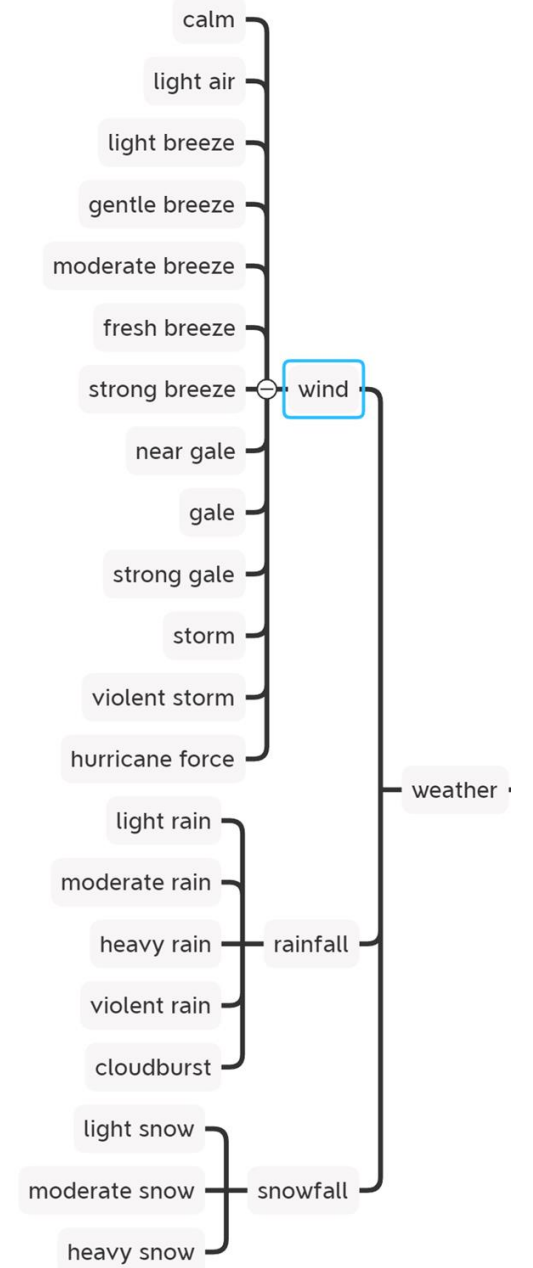# ASAM OpenODD Webinar

- WP1: ODD Attributes

Nicola Croce
Technical Program Manager @ Deepen AI
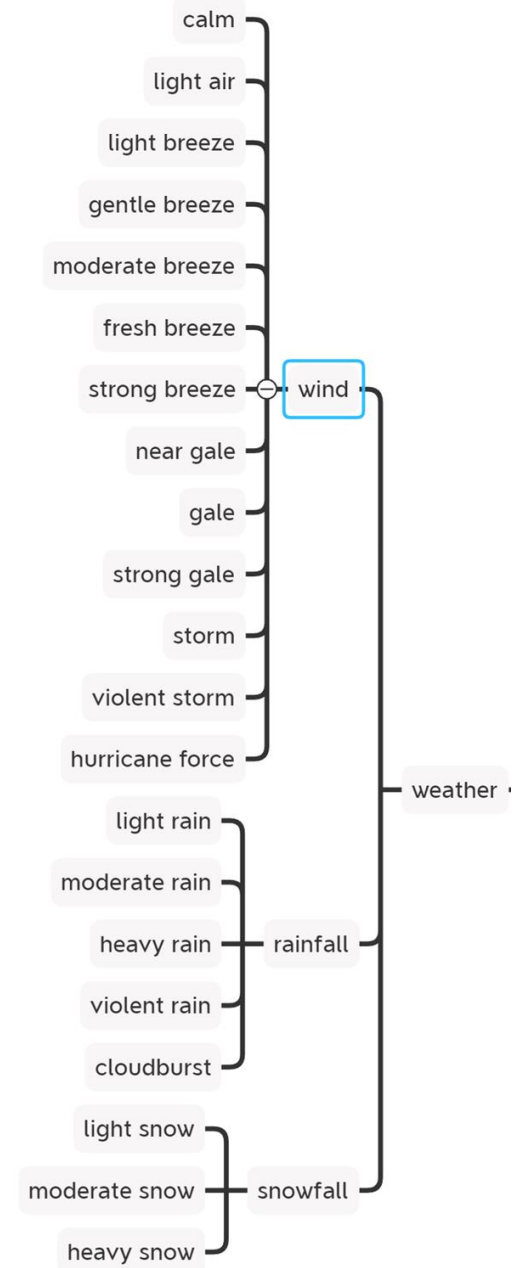nico@deepen.ai

Intro and Scope

WP1: ODD Attributes

- *The goal is not to standardize a specific ODD Taxonomy*

- *Provide a format template/approach for ODD attributes that fulfils the reqs. Of the rest of the standard*

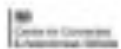- *This is a concept Project, not yet a full standardization project*
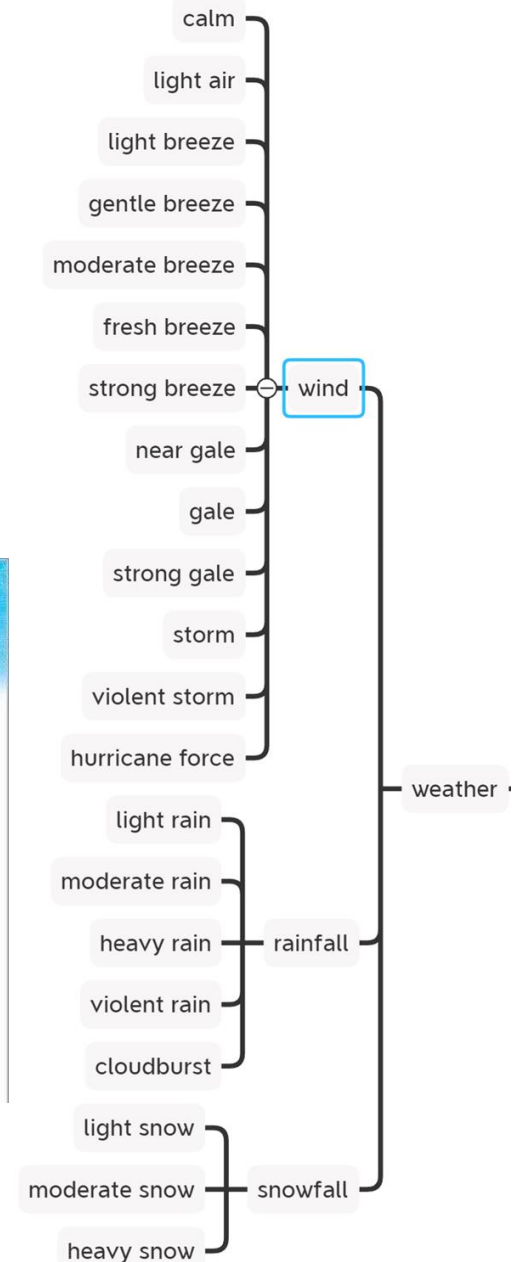
Approach

WP1: ODD Attributes

- Starting from existing standardized ODD Taxonomies

BSI PAS 1883

AVSC Lexicon

Approach

WP1: ODD Attributes

- Taxonomies Comparison

BSI PAS 1883

Examples for describing the time and space scales include:

a) *"the average rainfall intensity measured by a meteorological rain gauge over a period of a minute";*

b) *"the average rainfall in a rainfall radar pixel of specified size in km".*

Due to the natural variability, instantaneous rainfall values that are potentially significantly higher than this headline value might occur at the precise location of the CAV.

NOTE 2 *In addition to the average rainfall intensity, the type of rainfall may also be categorized to inform the degree of spatial variability and the rate of onset as well as the relative abundance of smaller or larger drop sizes. Rainfall may be described as:*

1) *dynamic (commonly "frontal") – associated with large scale weather systems;*

2) *convective – typically showery and potentially very intense;*

3) *orographic (commonly "relief") – associated with hilly/mountainous terrain.*

NOTE 3 *Stakeholders may classify rainfall intensity as follows:*

i) *light rain: when the precipitation rate is < 2.5 mm/h;*

ii) *moderate rain: when the precipitation rate is between 2.5 mm/h and 7.6 mm/h;*

iii) *heavy rain: when the precipitation rate is between 7.6 mm/h and 50 mm/h;*

iv) *violent rain: when the precipitation rate is between 50 mm/h and 100 mm/h;*

v) *cloudburst: when the precipitation rate is > 100 mm/h.*

**NOTE 4** *Stakeholders may choose a different categorization of rain.*

AVSC Lexicon

TABLE 1 Rainfall Rates [16]

Description	Inches per Hour	Centimeters per Hour
Light rain	0.01 (trace)-0.10	< 0.25
Moderate rain	0.11 - 0.30	0.26 - 0.76
Heavy rain	>0.3	> 0.76

TABLE 2 Fog Severity (adapted from NWS Experimental Fog Severity Index) [19]

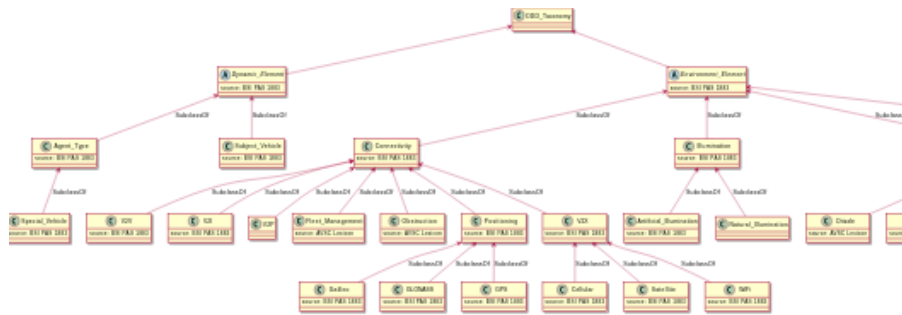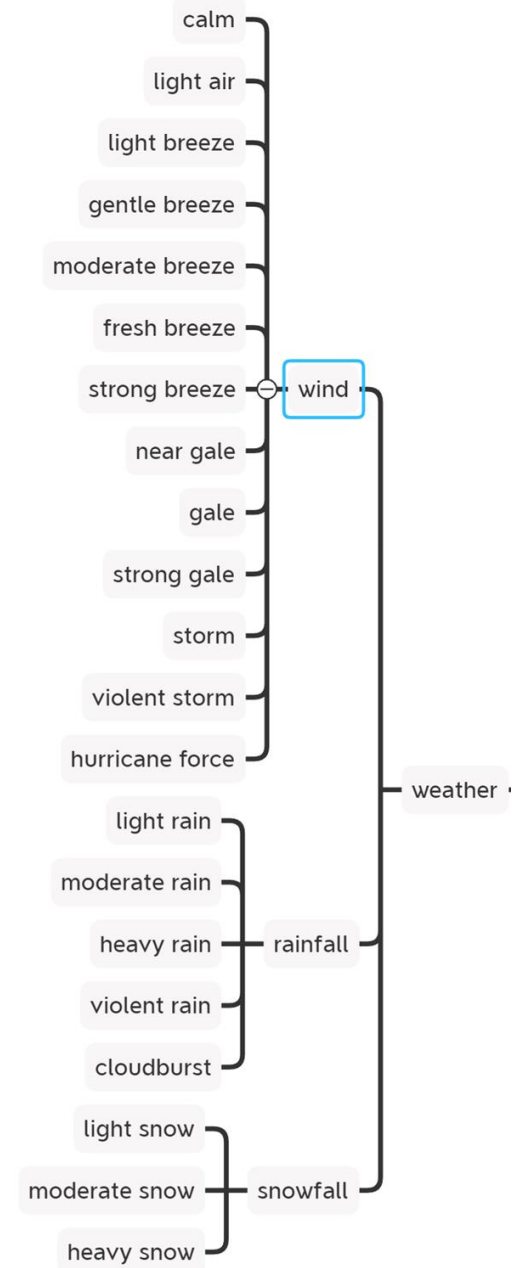| Fog Severity	Visibility in Feet (Meters)
5	200 (61)–0
4	800 (244)–200 (61)
3	2,640 (805)–800 (244)
2	5,280 (1609) (mist) -2,640 (805)
1	>5,280 (1609) (mist)
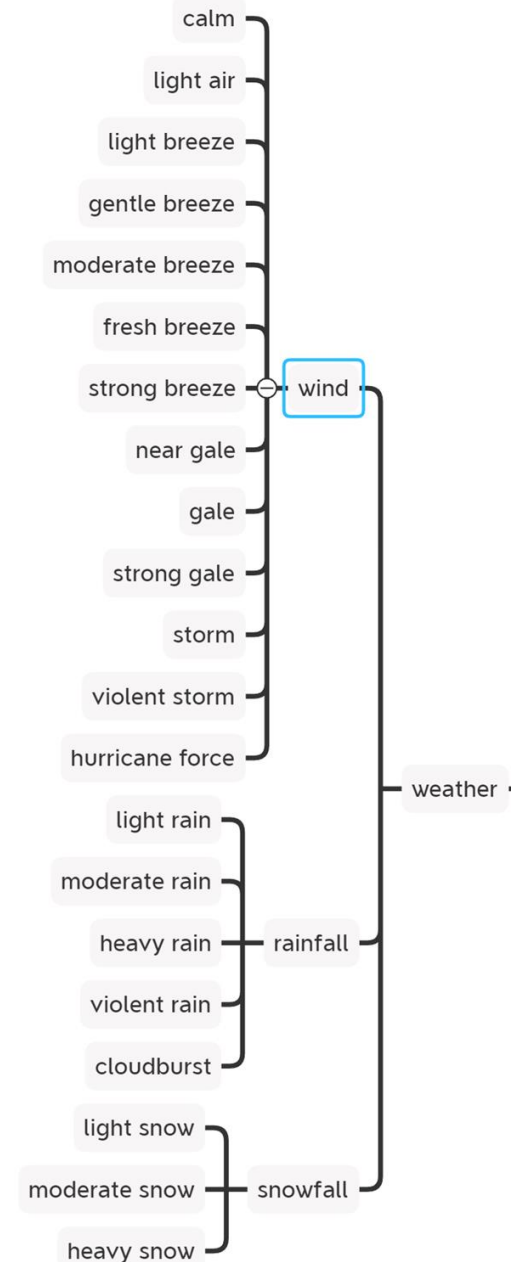
Solution

WP1: ODD Attributes

- Distinction between Taxonomical attributes that declare concepts, and Parameter attributes, that measure or define concepts

Taxonomical concepts
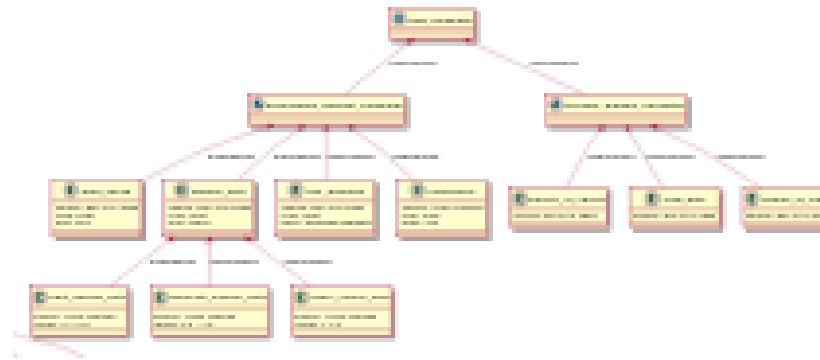
ODD Parameters

Solution Rationale

WP1: ODD Attributes

- Distinction between Taxonomical attributes that declare concepts, and Parameter attributes, that measure or define concepts

- Allows for multiple ODD_parameters to define/measure the same Taxonomical attributes

- Easier to extend and maintain

- Enables reusability of concepts and adaptability to different definition approaches

Note: this is a concept project so this is a suggested approach, we are not doubling down on a specific implementation solution yet
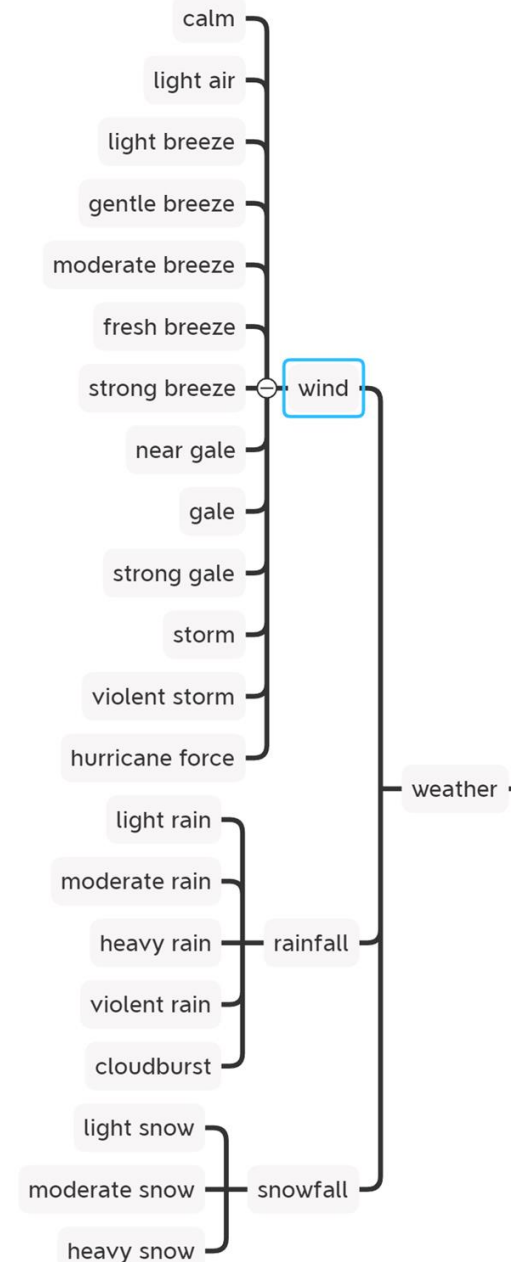
ASAM OpenODD Webinar

- WP1: ODD Attributes

Nicola Croce
Technical Program Manager @ Deepen AI
nico@deepen.ai

That was all, thank you!

ASAM