Samplings and Monitoring Programs

Synchronizing Well-defined CSV Files with the New Sensor Web Data Model

Christian Malewski

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für Wasser, Mensch und Umwelt

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- Numerous models vor hydrological ecosystems
  - **complex und data intensive**
  - **low data availability**
  - **limited adaptability**
- model for water quality change prediction in reservoirs
- Trade-off among less key-parameters and reliability
- Key-parameters should be mostly derived from remote satellite sensing

Passauna reservoir, Curitiba, Brasil

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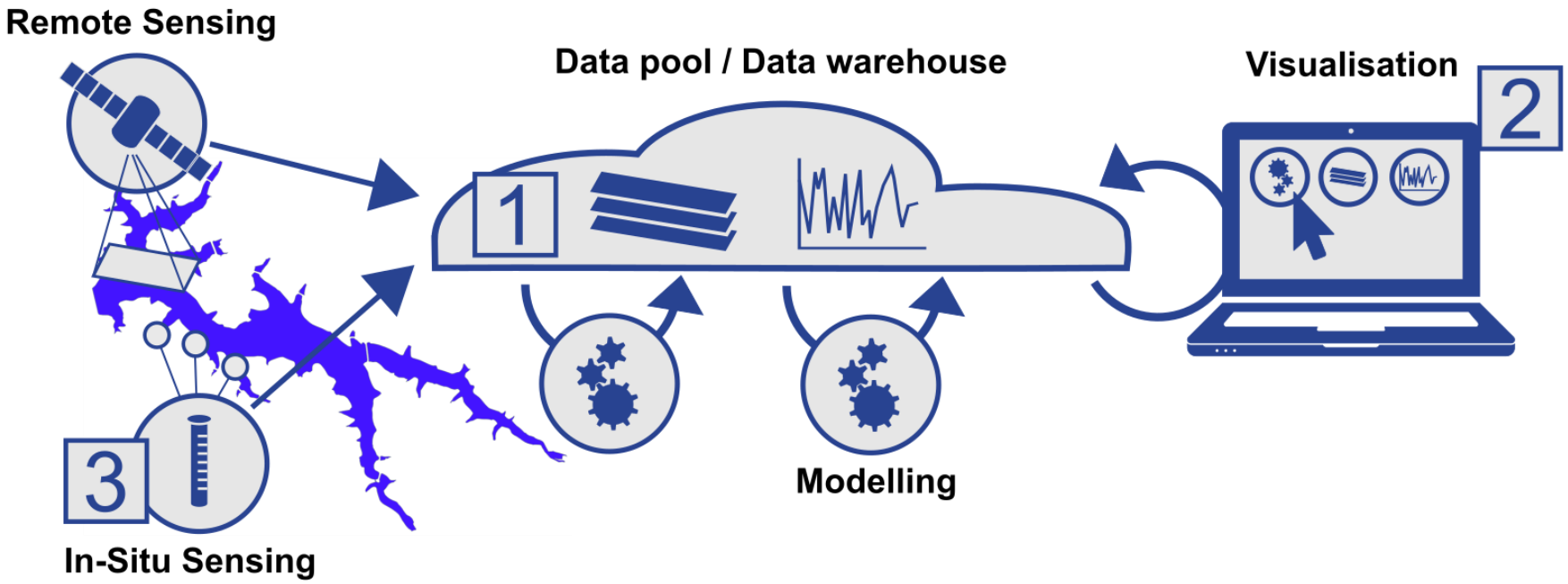
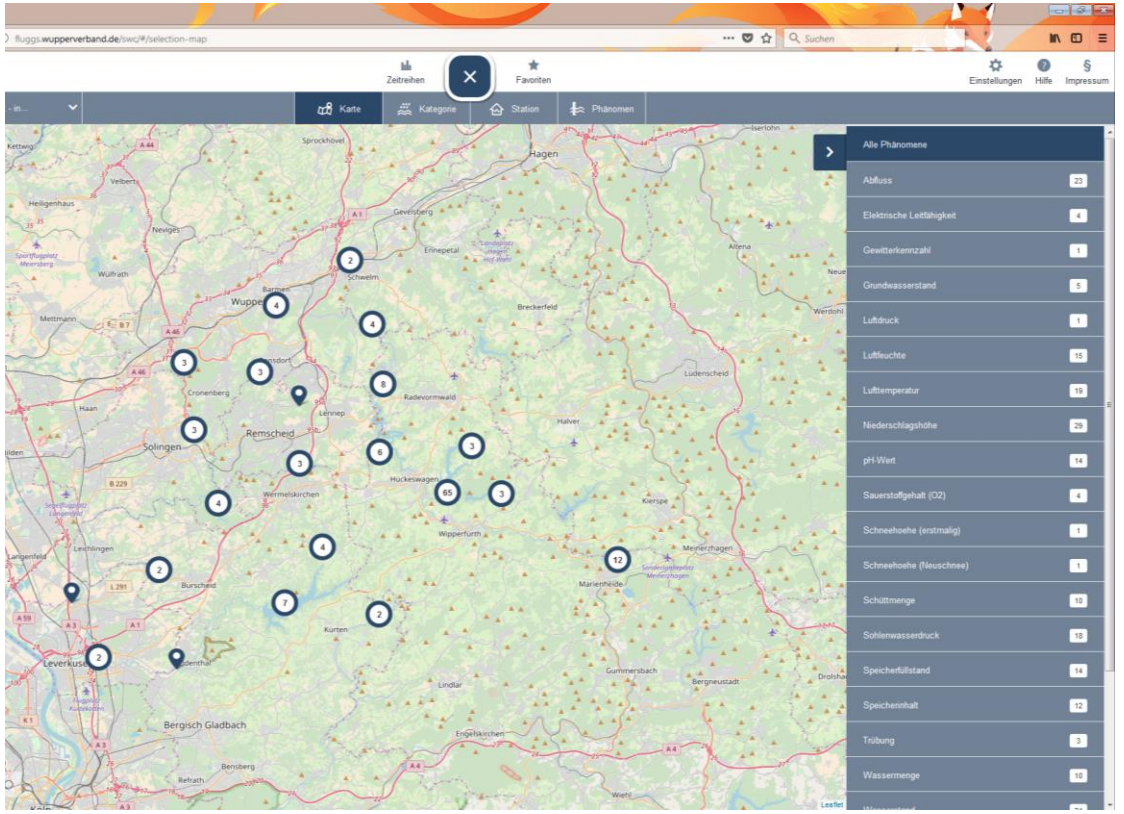


1 Development of components for interoperable data communication

2 Fürther development of components for measure data visualisation

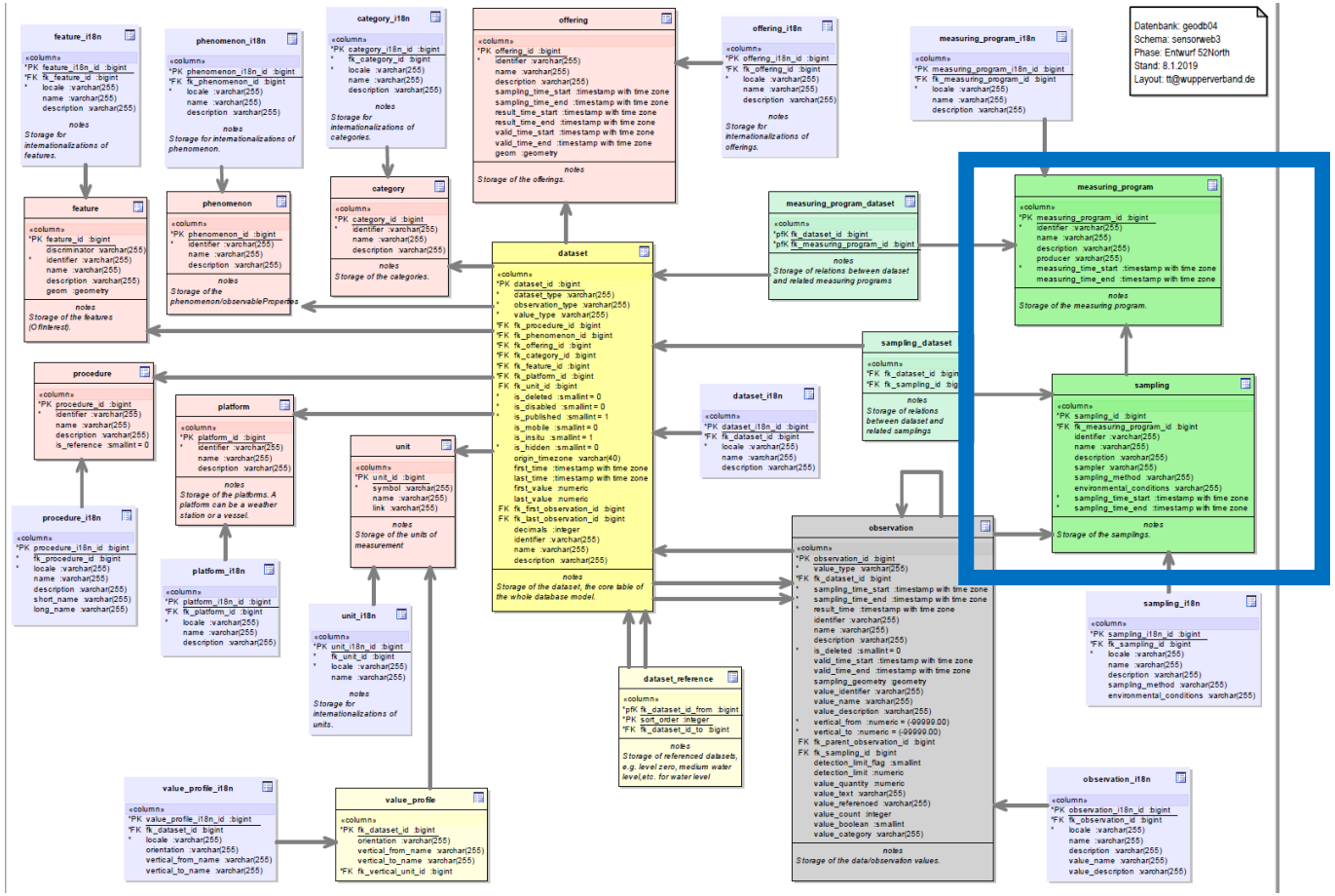
3 Integration of samplings and satellite images with the Sensor Web

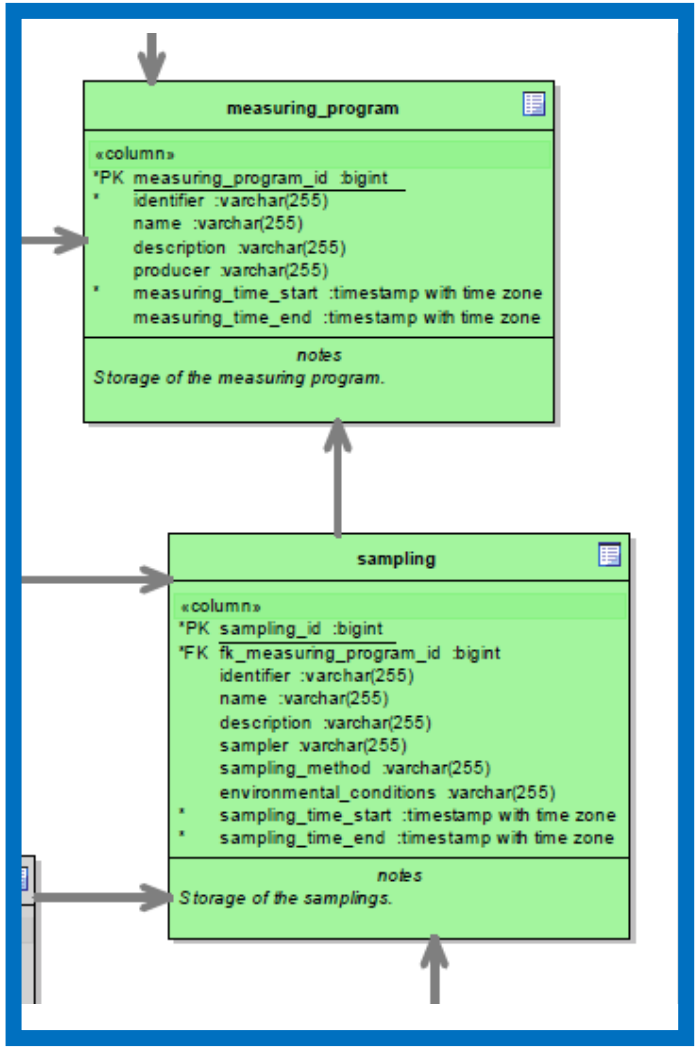
Our operative Sensor Web since 15 years



Simple Measurements and SensorThings API

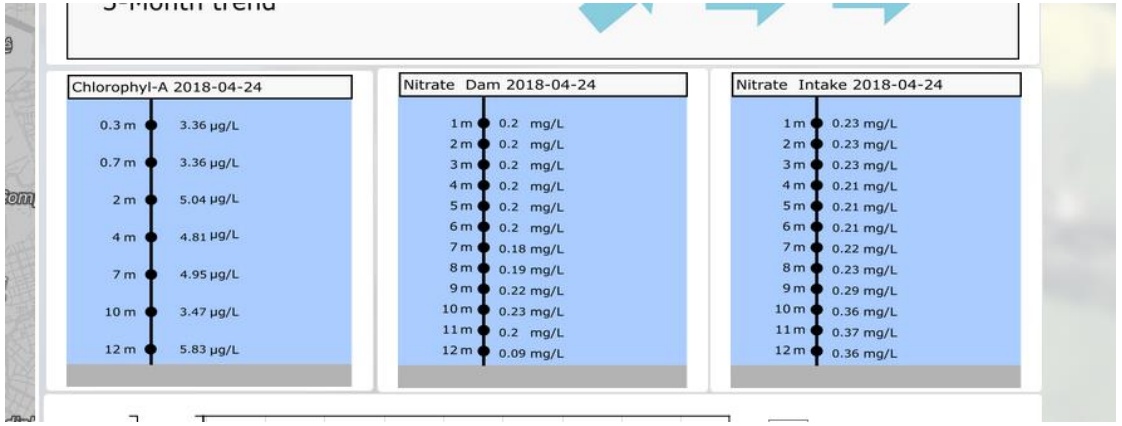
Samplings and Measuring Programs

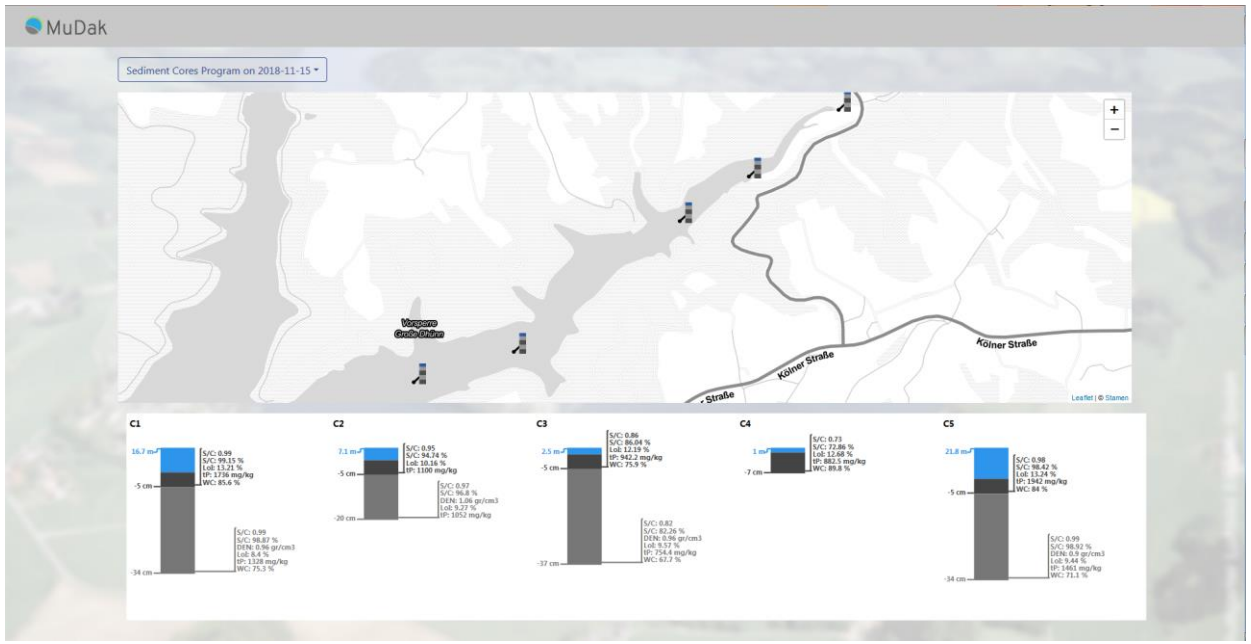


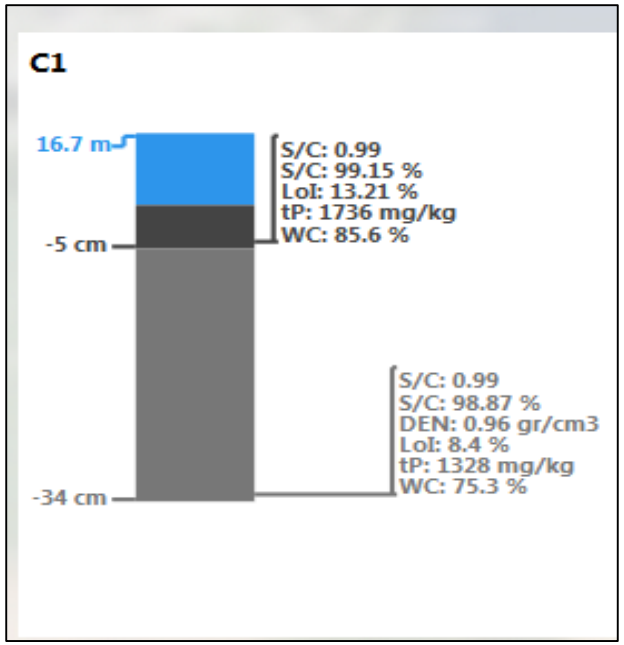


Samplings and Measuring Programs

sos3/api/samplings
sos3/api/samplings/13999
sos3/api/measuringPrograms
sos3/api/measuringPrograms/231







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Requirements

KEEP IT SIMPLE, STUPID

use the Sensor Web without realising it.

Data Template for in-situ Sampling Data

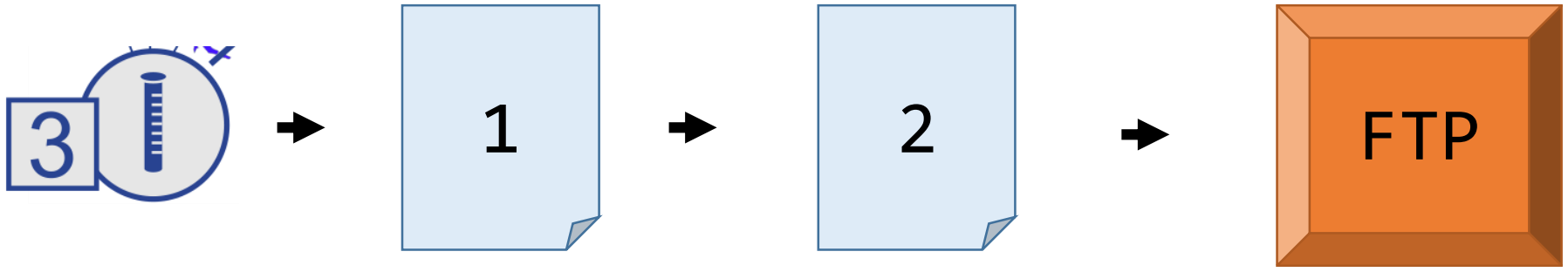
	A	B	C	D	E	F	G
1	#META						
2	EQUIPMENT	Used equipment for data collection (UNKNOWN, Several, U-50PC, etc.).					
3	PRODUCER	Producing organization of data (UFPR, Trios, e.g.)					
4	CONTACT	Email address of the person, who should be contacted in case of questions					
5	AUTOMATIC	NULL					
6	TIMEZONE	UTC-3 / UTC -2 / UTC+1 / UTC+2					
7	SOURCE_DATA	These very sheets were generated from raw data, which is in a manufacturers data format. Most of the original data should be					
8	COMMENT	Any further describing comments to this dataset.					
9							
10	#VALUES						
11	SITE_ID	WGS84_LAT	WGS84_LON	DATE	TIME	DEPTH	MEASURE_PARAM_(UNIT)
12	Measures with same site id are grouped.	Latitude	Longitude	Collection date. Formatted like YYYY-MM-DD	Collection time. Hh:mm:ss. NULL if unknown.	depth in metres below water surface	measure param as readable as possible. Unit in parenthesis. Example WINDSPEED_(m/s)
13							
14							
15							

Data Template for in-situ Sampling Data

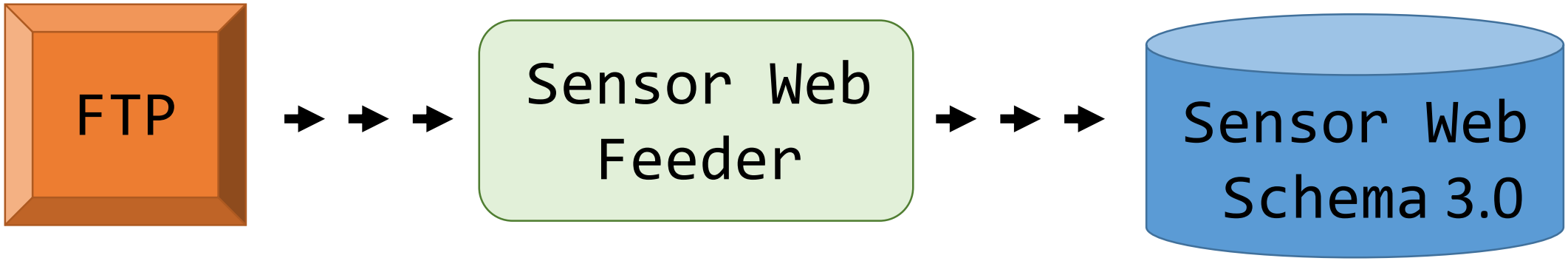
Considers:

- Simple Measurements
- Profile Measurements
- Trajectories
- Profile Trajectories
- Samplings (Multiple ~~phenomena~~ measure parameters at a single location)

Data Template for in-situ Sampling Data



Data Template for in-situ Sampling Data



Samplings and Monitoring Programs

Use the Sensor Web without realising it.

Christian Malewski (cmi@wupperverband.de)

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