

Legal aspects

with focus on data use



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Workshop «Digital Underground CH»

ETH Zürich




Agenda



- Legal topics of the underground
- Terms
- Regulation of documentation
- Dilemmas of publication
- Use of data on the example of the cadastre of subsurface utilities ZH

Legal topics of the underground

- Ownership – who controls the underground?
 - Planning and construction - who is allowed to build where?
 - Documentation - how do we obtain the overview?
 - Publication - what will be published?
 - Data use - who is allowed to use data and how?
 - Etc.
- 

- Open Government Data (OGD)

terms of use opendata.swiss



- Digital twin of subsurface utilities

- Shows the spatial position of all elements of **one** utility
- Includes all information for operating and maintaining the utility

- Cadastre of subsurface utilities

- Shows the space occupied by pipes
- Overview of **all types** of utilities
- No details of features
- Cadastre data are a small subset of the digital twins

Regulation of documentation

Obligation - Insight - Motivation

professional owner public services



- obligation and insight
- legal regulation
operation issues
maintenance issues
verifications

private owner

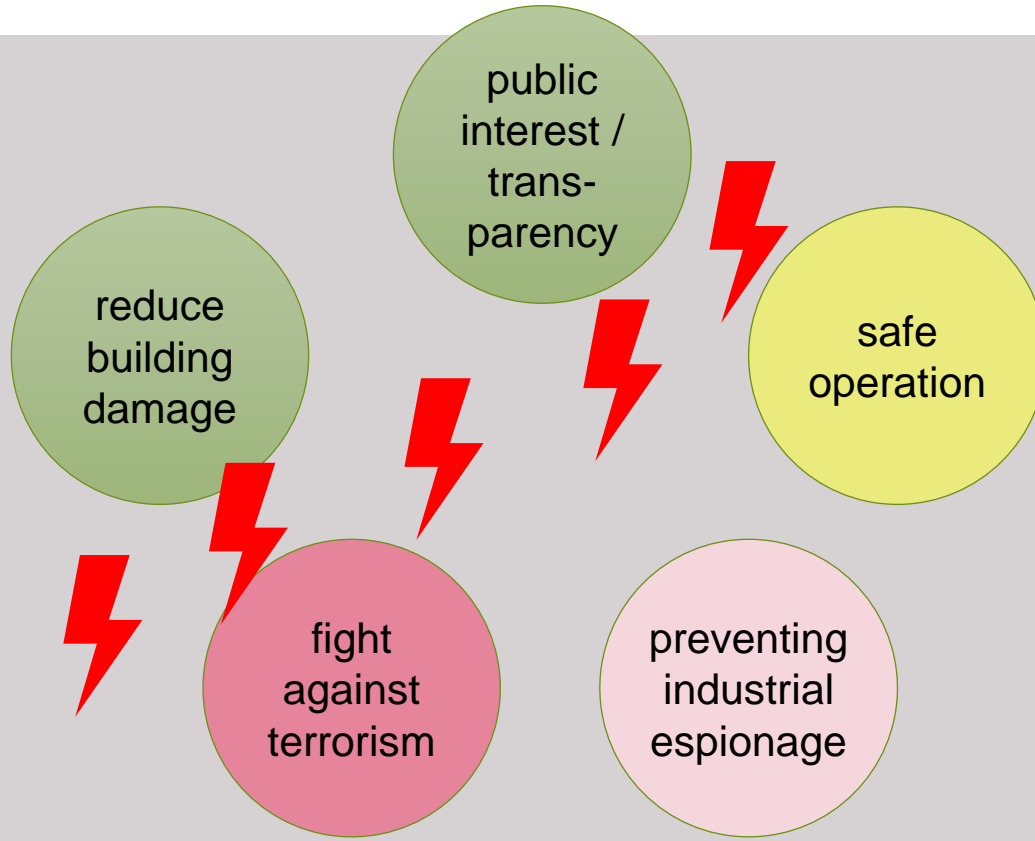
- e.g. waste water pips
- e.g. geothermal probes



- indirect obligation and motivation
- conditions in authorisations
indirect legal regulation
operation issues ... in an emergency

**Conclusion: Need for clear obligation
in sectoral legislation**

Dilemmas of publication



Publication strategy

Free use

Use with conditions

No use

Balancing act of data use

Conclusion: Real OGD is not possible - at the moment



As few restrictions
on use as possible

Safe operation and
public order

Legal regulation at the level of the law



Cadastre of subsurface utilities canton zurich

- Fundamentals in the cantonal law on geoinformation §19

- Only 4 items needed:
 1. Objectives:
 - Show overview of the space occupied by pipes
 - Contributes to coordination for planning and implementation tasks
 2. Mandate for setup central data platform
 3. Right to issue implementing regulations
 4. Obligation of the utility owners to provide the data free of charge and to keep it up to date

Concept of publication and data use

Cadastre of subsurface utilities canton zurich



Public Portal for viewing, print and data download

Technical restrictions on use (login, number of accesses, reduced section, etc.)



Use by utility owners, municipalities and cantonal authorities



Organisational restrictions on use with contract



Blocking data on critical infrastructure



Cadastre of subsurface utilities – copy of data



Extract **small subset** for catastral data -> providing data

Digital twins of subsurface utilities – master data

Regulations in the ordinance

Cadastre of subsurface utilities canton zurich



1. Scope
2. Terms
3. Cadastral management – definition and tasks
4. Duties of the utility owners
5. Access
6. Use
7. Monitoring
8. Special areas
9. Schedule of implementation

Conclusions on legal aspects

- Topic “underground” is characterised by very contradictory requirements and many actors with very different interests
- Solid legal foundations are the only way to use this sensitive cadastral data.
- The final legal arrangement for the Cadastre of subsurface utilities canton zurich is quite simple

BUT ...

- The road to agreement and convincing all stakeholders is long and demanding

As an outlook:

- Underground property issues shake the fundamental principles of civil legislation - very exciting topic



Links

in german only

- Cadastre of subsurface utilities canton zurich
<https://www.zh.ch/de/planen-bauen/geoinformation/kataster/leitungskataster.html>
- Cantonal law on geoinformation ZH
<http://www.zhlex.zh.ch/Erlass.html?Open&Ordnr=704.1>
- Cantonal ordinance of cadastre of subsurface utilities ZH
<http://www.zhlex.zh.ch/Erlass.html?Open&Ordnr=704.14>



Any questions ?

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