FIG Joint Land Administration Conference

UNIVERSIDADE FEDERAL DE SANTA CATARINA

TU Delft

RETHINKING UX IN 3D CADASTRAL SYSTEMS FOR INCLUSIVE LAND GOVERNANCE

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DISCLOSURE: I AM NOT A UX DESIGNER

Geospatial
UX design

2D / 3D
Geovizualisation

Cadastre and
Land Governance

CONTEXT: INCLUSIVE LAND GOVERNANCE

"A well-tailored cadastral system is in fact acting as a backbone in society."

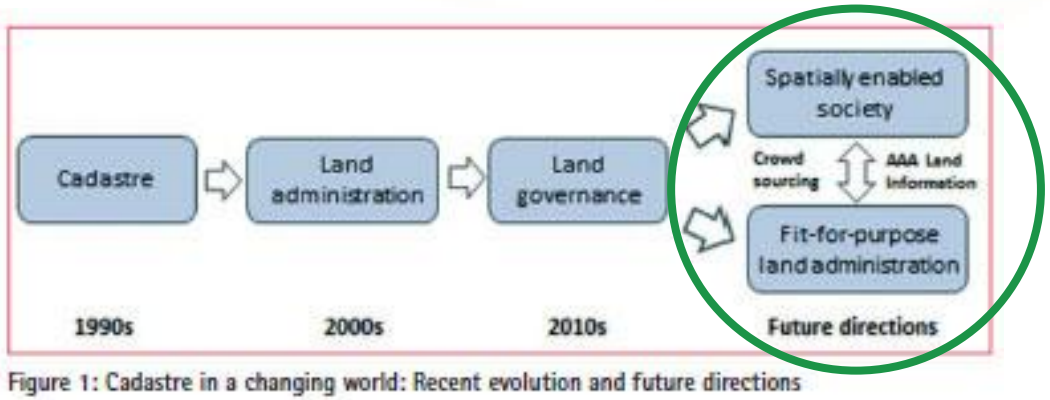


Figure 1: Cadastre in a changing world: Recent evolution and future directions

Citizens, non-experts

Community needs, expectations

Stig Enemark

FIG Honorary President, Professor of Land Management, Aalborg University, Denmark

Coordinates journal, 2015

CONTEXT: 3D CADASTRE FOR LAND GOVERNANCE

Many expected benefits :

UNDERSTANDING

Information is more accessible to non-experts.

Spatial visualization becomes easier for everyone.

COMMUNICATION

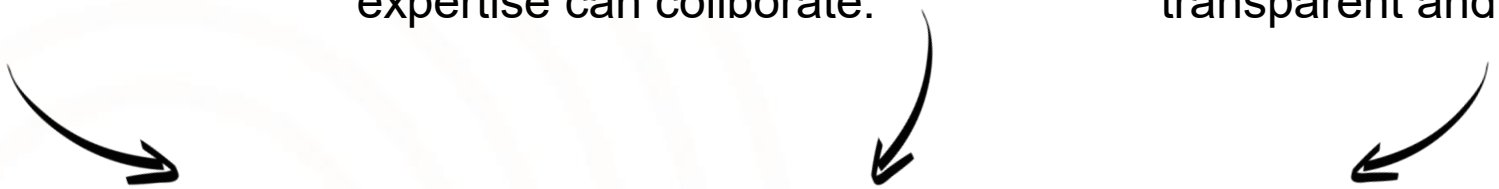
Data ambiguity is minimized.

Users with different levels of expertise can collborate.

DECISION MAKING

Heterogeneous sources of data are aggregated.

Decisions are more transparent and acceptable.



Non-experts & citizens are key players for 3D cadastre.

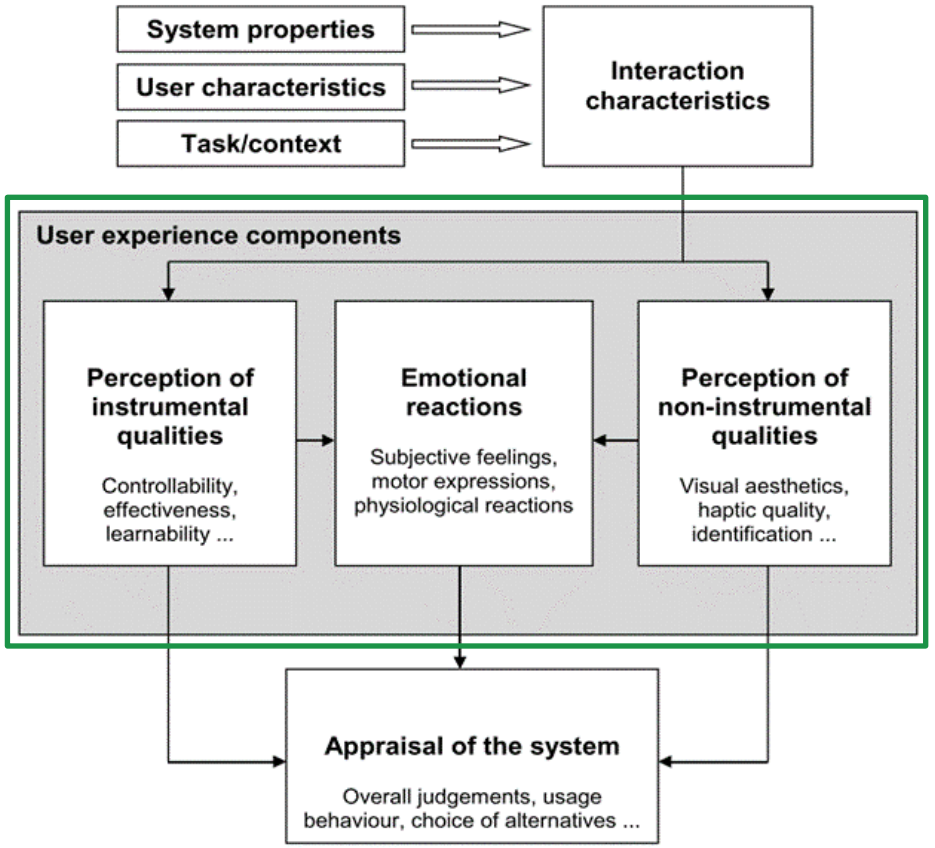
QUESTION: WHAT ABOUT UX IN 3D CADASTRE?

User Experience explores interaction between :

- The system *(3D cadastre)*
- The user *(non expert – citizen)*
- The task *(fit for purpose)*

Should involve the end users and explore their purposes

Should investigate 3 components



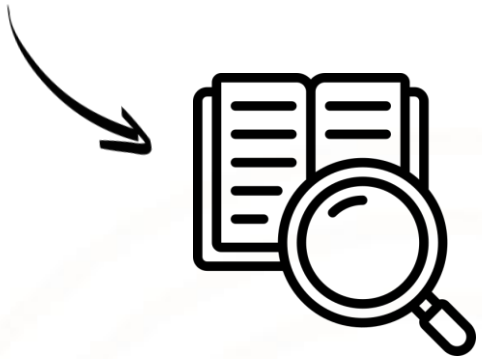
Thüring & Mahlke

Usability, aesthetics and emotions in human–technology interaction
International Journal of Psychology, 2007

QUESTION: METHODOLOGY

Hypothesis 1 : **Citizens or non-experts are not often involved in research about 3D cadastre**

Hypothesis 2 : **Emotions and non-instrumental qualities are out of scope**



Narrative review of literature regarding 3D Cadastre UX

Position statements based on interdisciplinary backgrounds

RESULTS: LIMITED UX APPROACH

Among the reviewed articles:

PROTOTYPE ORIENTED

Core of research often focuses on **prototyping**.

User reaserch is mostly for validation phase.

NO CITIZEN INVOLVED

Some studies investigated non surveyor users.

Citizens are almost **never** involved.

INSTRUMENTAL QUALITIES

UX limited to instrumental **usability** and accessibility.

Tasks are oriented toward professionals needs.

Interesting findings for inclusive land governance anyway!
Please read the paper for more detailed analysis and comments.

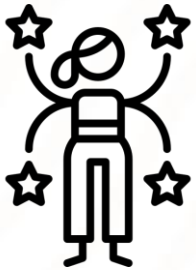
DISCUSSION: THREE TRACKS

Aesthetic and emotions matter

Investigate the role of appealing rendering in improving perceived value and trustworthiness of 3D cadastral systems.

Involve the users

Identify citizens' needs in terms of features, data production, personalization capabilities by engaging them from the design phase.



Celebrate interdisciplinarity

Engage with human factors and design researchers to move beyond prototypes and technology-first approaches.

PERSPECTIVES

Could FIG play a key role in structuring a more holistic approach of UX in 3D Cadastre research?

Picture generated by ChatGPT

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THANK YOU!

Interested in collaboration in UX and cadastre?

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BONUS: 3D CADASTRE EXAMPLES