



**“Cadastre Made in Austria:  
200 years development in quick motion”**

**CVC Vienna, 5-6 October 2017**

# A journey over 200 years in 20 minutes...

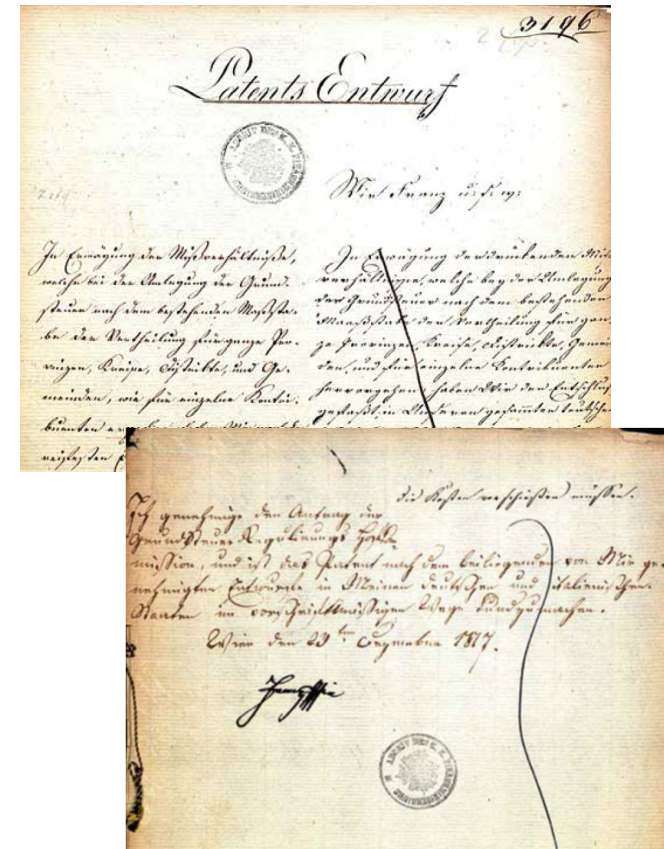
- Important Milestones
- A chain of important decisions
- Steps by step development
- Process Cadastre and LR
- Characteristics of the Austrian Cadastre
- Ongoing Improvements
- Upcoming Innovations



# Important Milestones

“Milestones are important to emphasize and embrace” (F. Zetterquist, Sweden)

- 1817: Land Tax Act (Grundsteuerpatent)
- 1871: Land Registry Act
- 1883: Land Cadastre Act (Evidenzhaltungsgesetz)
- 1968: Surveying Act
- 1981: Real Estate Database
- 2004: Digital Cadastral Map
- 2005: eGeodata – Austria
- 2012: Electronic Entry Process, Cadastral processing

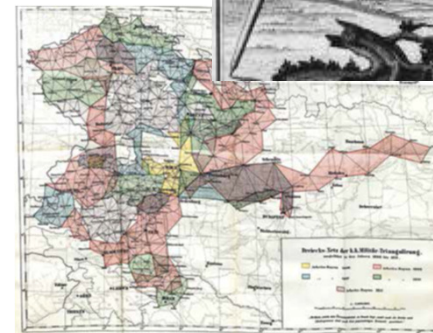
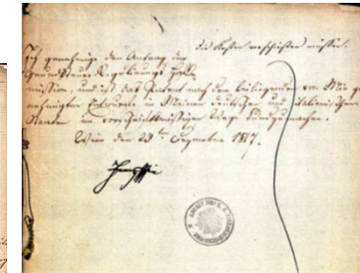
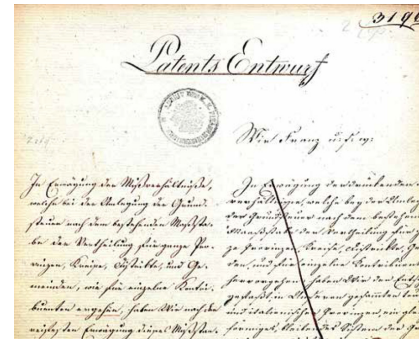


## The Role of the Franciscan Cadastre in the 19.<sup>th</sup> Century

- The Civil Code (1811), the foundation of the National Bank (1816) and the Land Tax Act (1817) were the political fundament of a new financing system
- FC was fundament of redevelopment of taxation and part of initiative for reform of the state
- Scharr (2014): Legal and political targets of the FC were the building of a unique legal framework for taxation in the provinces of the monarchy > establishment of a uniform economic region > important step to a modern state

# A chain of important decisions \_1

- 1817: start with a **reference system** and **survey every single parcel** > a complete register
- Implementation of Austrian Land Register (“Grundbuch”, 1871) > **Cadaastre as precondition** (> parcels)
- **Permanent updating** process and **mutual data exchange** between Cadastre and Land Register (since 1883)
- Extension from tax purpose of the Cadastre to **legal Cadastre** (“Grenzkataster”): legal coordinates (1968)

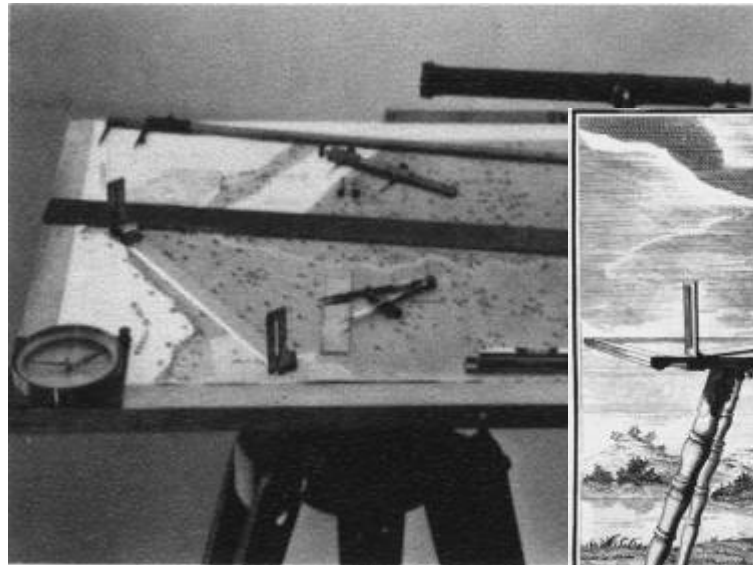




## A chain of important decisions \_2

- Cadastre as a register for many purpose of public administration (planning,....) and infrastructure companies
- A constant adaptation to the technical and economic conditions
  - innovation in technique of measurement and data processing
- Digitalisation of the Cadastre since more than 60 years
  - data on punched cards.....
  - Reale Estate database
  - Cadastral Processing System
  - Virtual workplaces
  - Digitization of old maps and surveying documents
  - Structured surveying documents
- C + LR is public information

# From Plane table ...



Brünner Kreis.

Fusionstabelle.

Gemeinde Zbraßlau.

Nr. der topographischen Übung	Name des Grundeigentümers und des Grundstückes. Nr. des Hauses.	Bezeichnung des Grundstückes	Anzahl der Flächen	Ausmessung		Flächen	Acker						Wiese	
							durch die Klafter		durch die Ingenieur- Maße		Klafter		Klafter	
							in die Länge	in die Breite	in die Länge	in die Breite	in die Länge	in die Breite	in die Länge	in die Breite
1	Peter Gaudner am Schwarzenfeld Nr. 1	Reiten	95	165	80	-	8	400	125	-	125	-	-	-
2	Anton Hammer am Langfeld Nr. 1	Joch	1	100	16	-	1	-	91	-	91	-	-	-
3	Johann Bauer am Moos nächst dem Anton Hammer Nr. 71	Tag- werk	1	65	95	-	-	-	-	-	-	-	1	95
4	Josef Fuchshaus am Weiden- feld nächst dem Gmelinwald Nr. 16	Viertel	1	40	20	-	-	-	-	-	-	-	200	15
5	Herrschaf Althausen-Nöthenwald	Metzen	300	-	-	-	-	-	-	-	-	-	60	300
Summe			-	870	141	10020	9	400	125	91	125	24	1	95
Gesamt Aente in 2 Jahren			-	-	-	-	-	-	-	-	-	-	-	-
Aente auf 1 Jahr			-	-	-	-	-	-	-	-	-	-	-	-
Durchschnitt auf ein Joch			-	-	-	-	-	-	-	-	-	-	-	-
End auf einen Metzen			-	-	-	-	-	-	-	-	-	-	-	-

Rechtig befunden.  
Kaiserl. k. k. Kreis-Commission.

N. S.  
Oberamtman.

N. S. Richter im Namen der ganzen Gemeinde.  
N. S. Gschworne.  
N. S. Gschworne.

# ... to a developed digital system



**Katastralmappe, Verzeichnisse Druck/PDF**

Vermessungsamt: Oberwart  
Katastralgemeinde: Eltendorf (31106)

Vermessungsamt: Oberwart

Grundstücksverzeichnis aus der Katastralgemeinde: Eltendorf (31106)

Namensierung: fortlaufend

Grundstücksnummer	G.	Benützungsart	Nutzung	Flächenindikator	Fläche (m²)	Ertragsmesszahl	Grundbuchnummer	Einlagezahl
38				rechenbar	791		31106	837
		Baufläche	Gebäude	Teilfläche	391			
		Baufläche	befestigt	Teilfläche	277			
		Baufläche	begrünt	Teilfläche	123			

Adresse des Grundstückes: Kirchenstraße 4

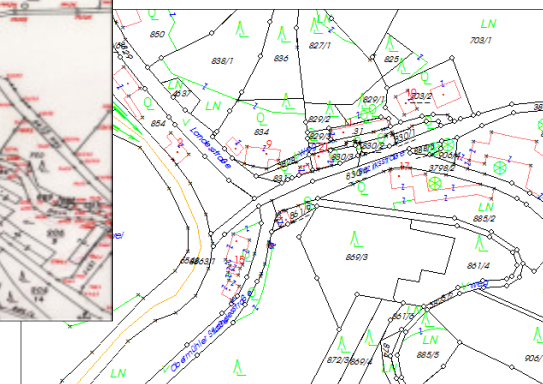
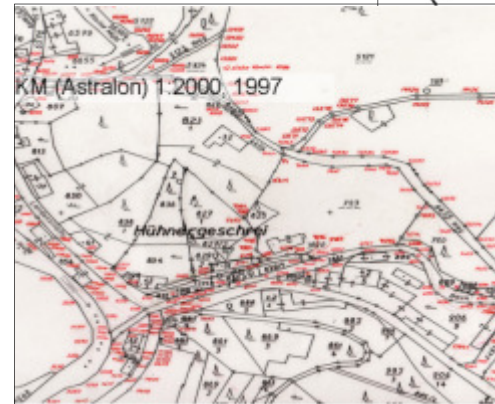
Veränderungshinweise: 1/1900, 409/1906, 300/2000

Mappenblatt: 7421-24/2



# From Land Tax Cadastre

- Land Tax Act 1817
- Basis for taxation of agricultural land
- Surveying of all parcels by means of plane table
- Graphic documentation in the cadastral map
- Descriptive information in tables



## ... to Cadastre of Boundaries (legal cadastre)

Is not a new cadastral system, but:

- parcel boundary is **legally binding**
  - protection of good faith
  - in case of boundary dispute, the surveying authority is in charge (not the court of justice!)
  - „Cadastre of coordinates“
- negotiation with owners > **signature** by owners > surveying (coordinates) > surveying document
  - licensed surveyor or cadastral office
- Legal certification by cadastral authority
- **Precondition** for registration process
- Currently 16 % of all parcels
  - Step by step approach



# From a documentation system ...

- the Cadastre served primarily the representation of the relative position of parcels
- the cadastral map was a picture with very little legal relevance
- the archive of documents was legally significant
- updating of the Cadastre therefore had low priority and was carried out only once a year.



Brünner Kreis. Fassionstabelle. Beilage A. Herrschaft Althörs.

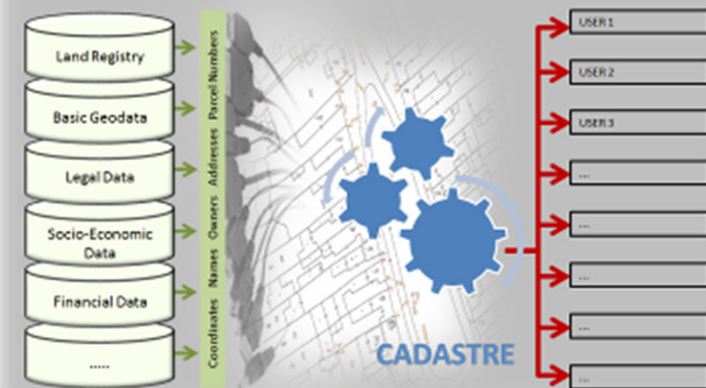
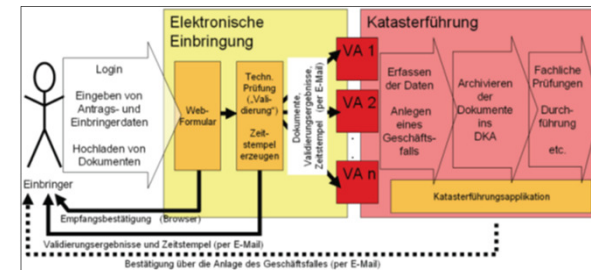
Gemeinde Zbraslau.

No. der Inhabergüter	Name des Grundbesitzers und des Grundstückes, No. des Hauses.	Benennung	Anzahl	Anmerkung		Acker		Wiesen		Weingärten		Waldungen	
				durch die Klaffen	durch die Lage	Klaffen		Klaffen		Klaffen		Klaffen	
				in die Lage	in die Lage	Wiesen	Korn	Wiesen	Korn	Wiesen	Korn	Wiesen	Korn
1	Peter Grundner am Schwarzfeld	Metzen	95	165	80	8	400	125	125	-	-	-	-
2	Anton Hammer am Langfeld	Metzen	1	100	16	1	-	91	24	-	-	-	-
3	Johann Bauer am Kroll	Metzen	1	65	95	-	-	-	-	1	25	20	10
4	Josef Postelbauer am Bräunfeld	Metzen	1	40	20	-	-	-	-	-	900	15	-
5	Herrschaft Althörs am Bräunfeld	Metzen	300	-	18070	-	-	-	-	-	-	60	200
	Summe			870	141	18070	9	400	125	91	125	24	45
	Ganze Acker in 2 Jahren			-	-	-	-	-	-	-	-	-	-
	Acker auf 1 Jahr			-	-	-	-	-	-	-	-	-	-
	Durchschnitt auf ein Jahr			-	-	-	-	-	-	-	-	-	-
	Uebl auf einen Metzen			-	-	-	-	-	-	-	-	-	-

Richtig befinden: N. S. Oberamtman. N. S. Richter im Namen der ganzen Gemeinde. N. S. Gesehensme. N. S. Gesehensme.

## ....to an information system ...

- Public authorities and infrastructure companies started using the Digital Cadastral Map as basic/part of an Information system
- changed the requirements of CAD to GIS
- topological structures enabled the intersection and integration with other data
  - e.g. Real estate database, zoning, ...
- Electronic process from the authorized surveyors to the registers



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# Process Cadastre - Land register

- Via electronic request application
  - Mandatory for notaries, layers
  - Cadastral Offices
- Safe access via secure code
- One single and authentic reference document (subdivision document)
  - archived in the central registry of the BEV
- Update of the Cadastre immediately following the decision of the LR
  - no more waiting for analogue copies
- Enabled by the pre-execution layer
  - pre-execution of graphic data in the special layer of the Cadastral map
- “No” time lag between Cadastre + LR



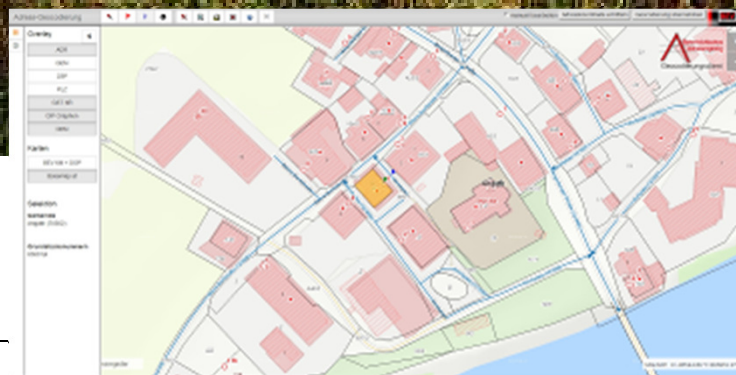
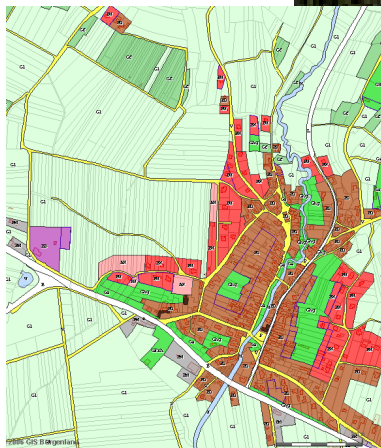
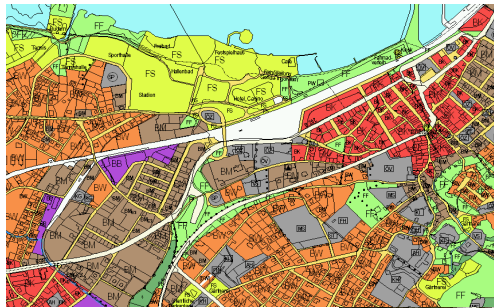
## Characteristics of the Austrian Cadastre

- Good example for working Public and Private
- Large scale map
  - National coverage with identical definition
  - Homogeneous data set
  - (very) Good accuracy
- “Real time” - maintenance
- High availability (24/7)
  - all data available in digital form
  - Data are public and accessible to everyone
  - Full record of any changes concerning parcels since 1883



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# Cadastral is also used for .....



## Ongoing improvements in the Cadastre

- Scanning the cadastral archive
  - more than 5 Mill. surveying documents
  - from 1883-2012
- Develop structured surveying document
  - Extract descriptive information from the pdf- document
  - 1. step towards electronic object- change
- Semi- automatic process to update land cover information in the Cadastre
- Homogenize the fixed points system
  - More than 250 000 reference points in ETRS
- Prepare transfer to an new reference system
  - from MGI (national system, Gauß-Krüger) to UTM



# Upcoming Innovations..??

- Permanent improvement of institutional cooperation
  - from separated analogue single- processes to integrated digital processes
- Extension of functionality of objects/rights: spatial determination of urban infrastructure;
  - 3D, Public Rights and Restrictions, ...
- Cadastre closer connected to market needs
  - new services with market relevant content
- Innovative tools to visualize cadastral /LR information



If the wind of change blows,  
some will build windmills,  
the others walls!

(Chinese saying)

**Thank you!**

Austrian cultural heritage  
**200 Years Cadastre**

See you:  
[www.bev.gv.at](http://www.bev.gv.at)