

viadonau

Short-term measures in waterway maintenance for 2013 in Austria

Hans-Peter HASENBICHLER

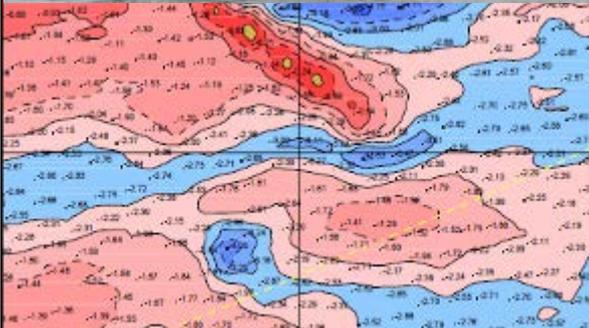
Managing Director, via donau

Linz, 18 April 2013

Customer-oriented waterway management

①

Surveying



②

Dredging

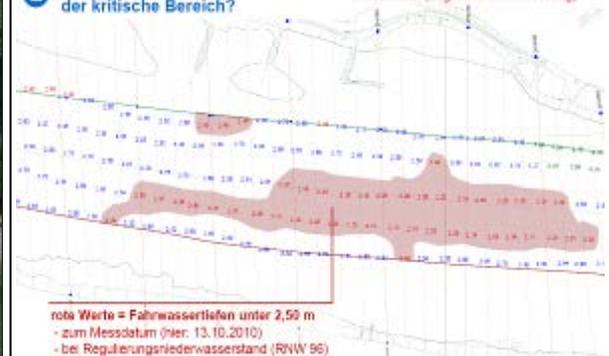


③

Information

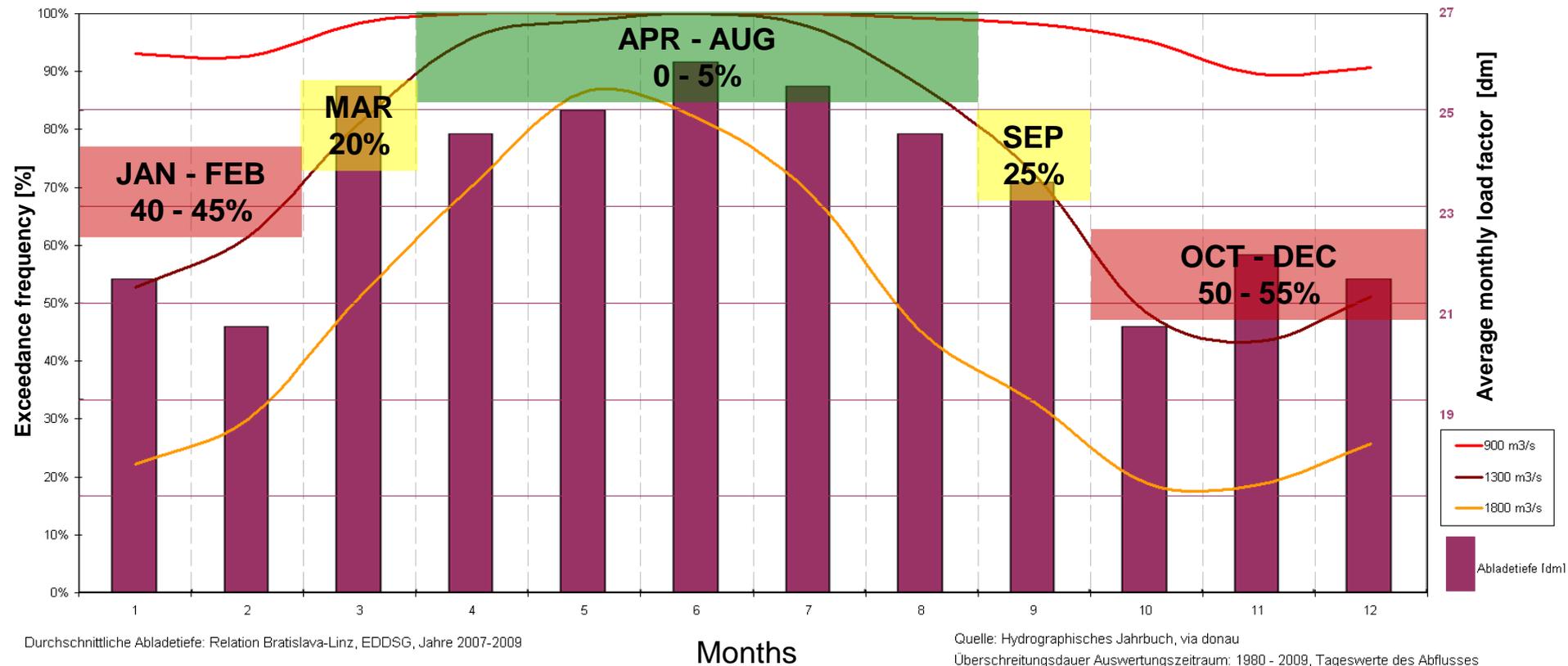
② Wo befindet sich zum Messdatum der kritische Bereich?

Messdatum (Tag der Schlußmessung)

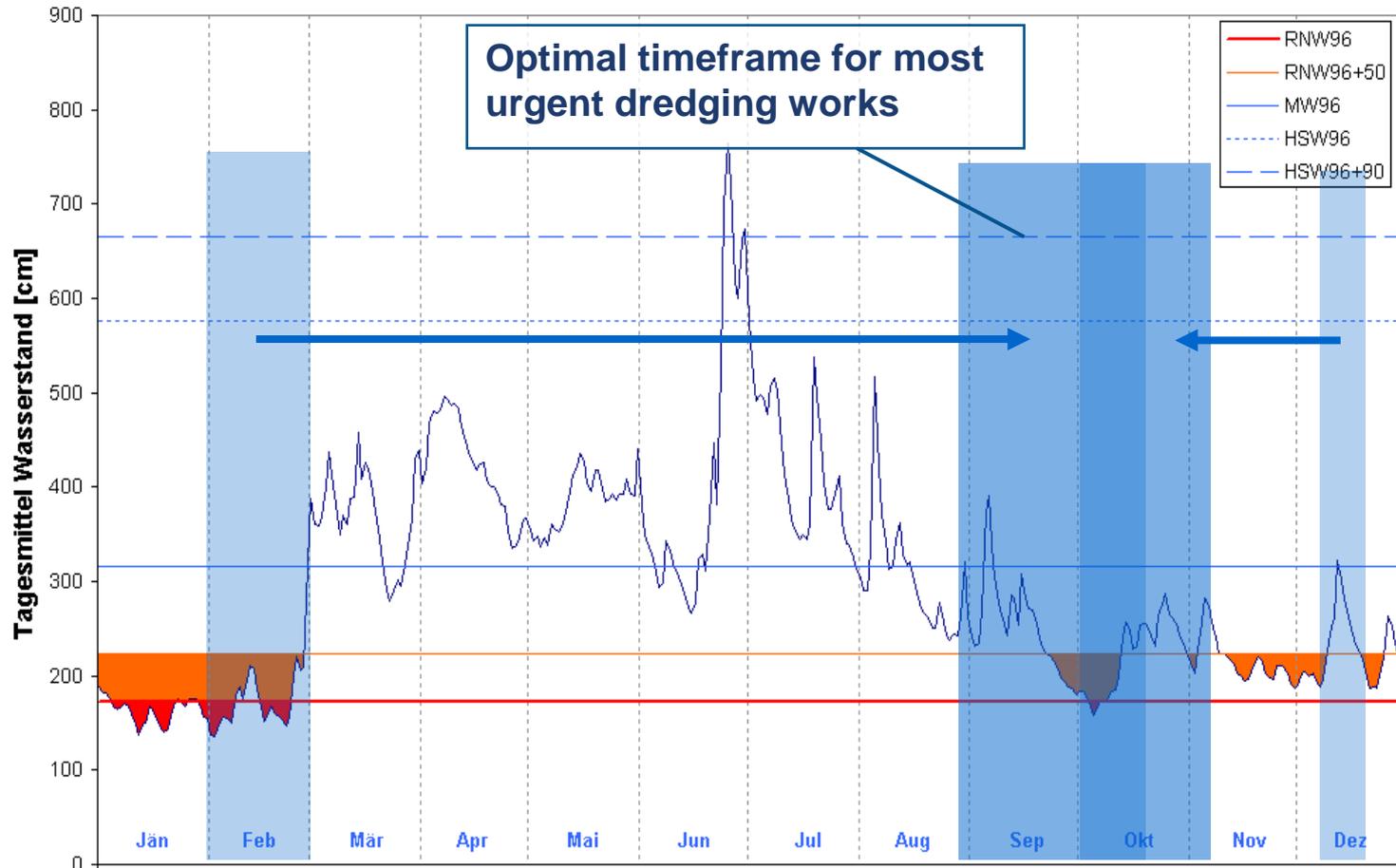


Long-term frequency of low water periods

Exceedance of low navigation & regulation level (LNRL) + 0.5 metres (1980 – 2009) and average monthly load factor of vessels



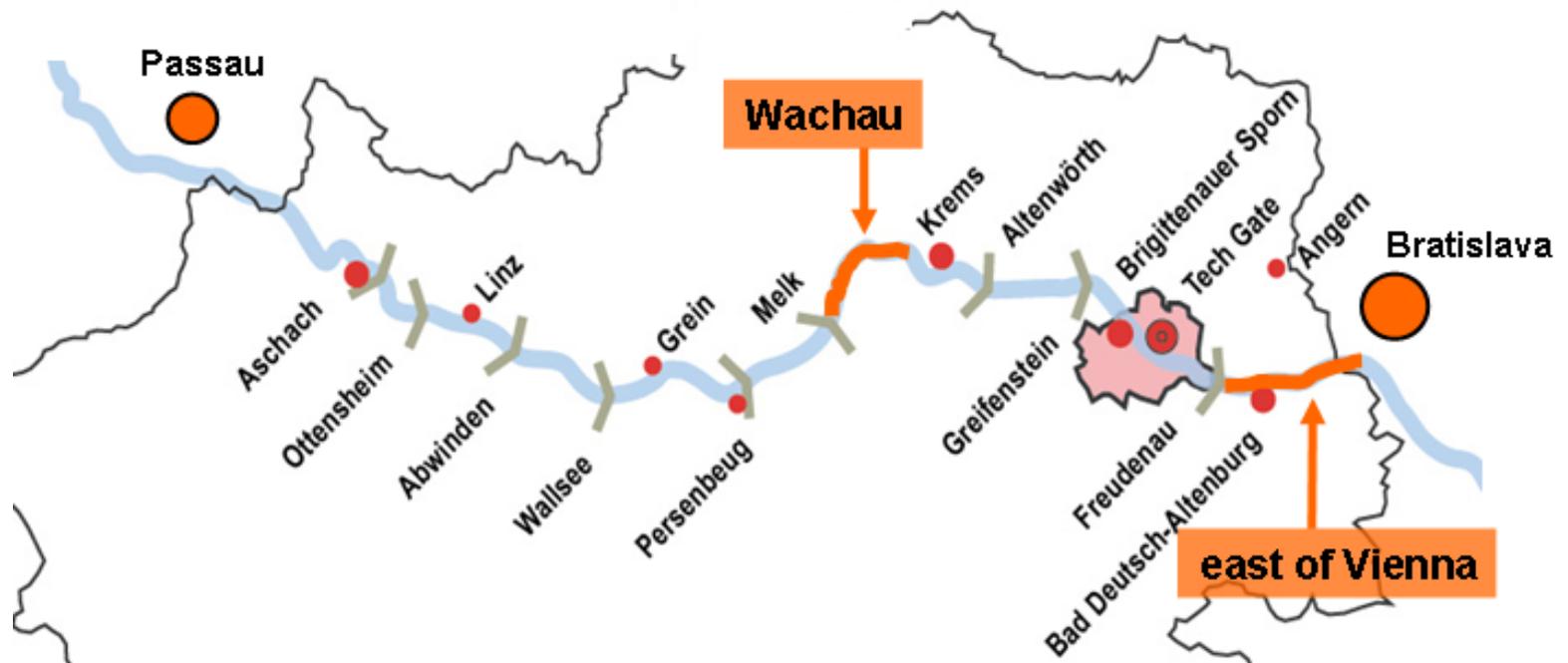
Optimization of time frame for dredging



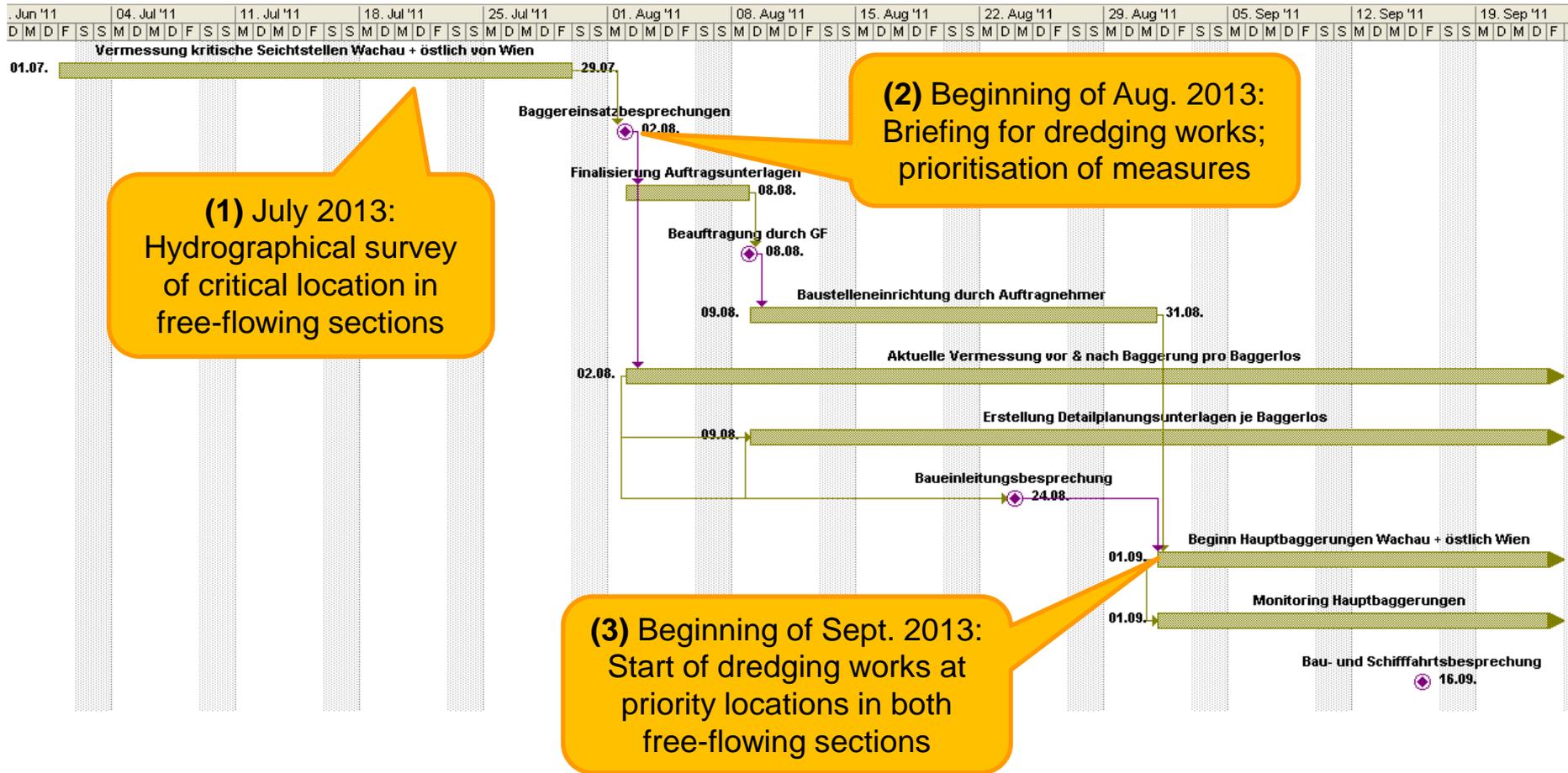
Dredging works for most critical shallow sections shall take place at the beginning of autumn (starting from September) before the potential low water period!

Free-flowing sections of the Danube

- **Wachau valley** (river-km 2,038.00 to 1,998.00):
From river power plant Melk to the Port of Krems
- **East of Vienna** (river-km 1,921.00 to 1,872.70):
From river power plant Freudenau to Austrian-Slovakian border



Sample schedule for prioritized dredging

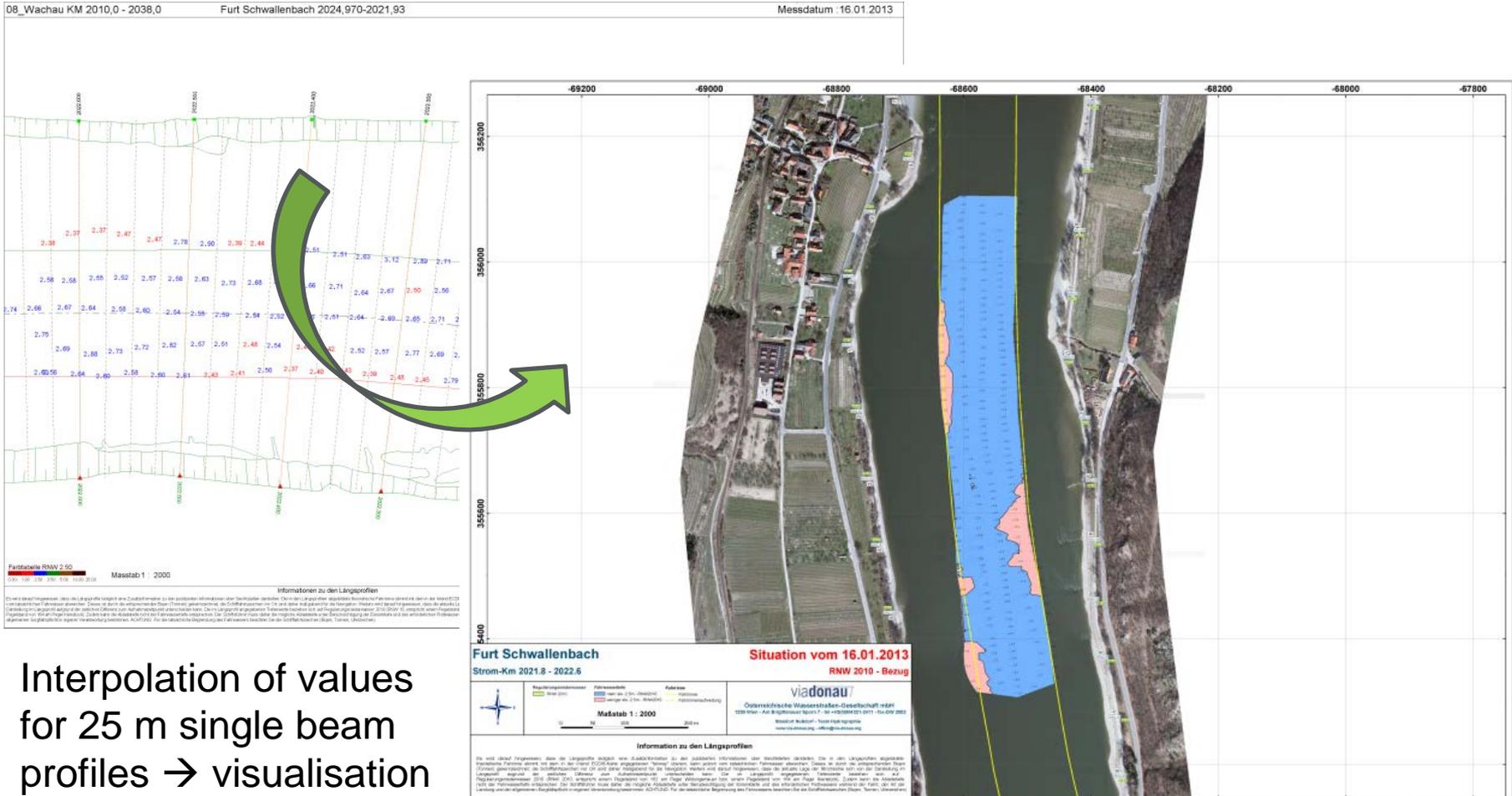


Indicative interventions planned for 2013

- **Free-flowing section east of Vienna:**
 - 11 priority locations
 - Cubature: 120,000 m³ gravel + 40,000 m³ sediments
 - Costs for dredging: 1.3 mio. EUR

- **Free-flowing section at Wachau:**
 - 6 priority locations
 - Cubature: 156,000 m³ gravel + 67,000 m³ sediments
 - Costs for dredging: 1.8 mio. EUR

Enhanced information on shallow sections



Interpolation of values for 25 m single beam profiles → visualisation in "depth layers"



Enhanced information on shallow sections

Online → http://www.doris.bmvit.gv.at/en/water_levels_low_sections/shallow_sections/

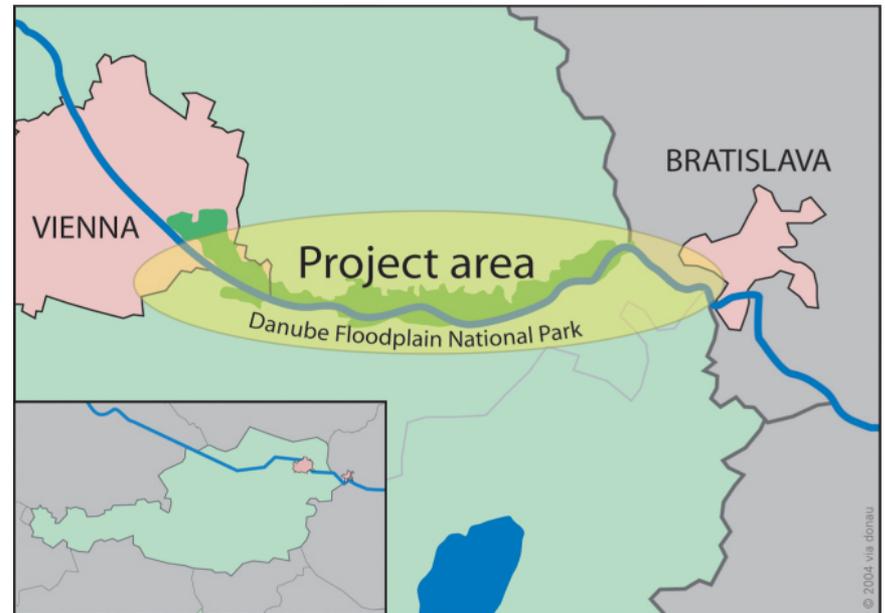
SHALLOW SECTIONS

Tuesday, 9. April 16:00 o'clock

Shallow section	Shallow section (river km)		Depth of shallow section referred to DRLWL	date of sounding	relevant gauge	Current min. water depth	24h forecast	PDF longitudinal profile
	From	To						
Seichtstellen in der Wachau (Strom-km 2.038,0 bis 1.998,0):								
Furt Schwallenbach	2022,50	2022,00	23	11.03.2013	24,6	31,2	29,7	
Furt Hofarnsdorf	2019,20	2018,50	25	11.03.2013	24,6	33,2	31,7	
Furt Weißenkirchen	2014,00	2013,50	24	11.03.2013	24,6	32,2	30,7	
RNW 2010 am Richtpegel Kienstock (KIEN): 16.4 dm								
Haufenrand Dürnstein rechts	2010,20	2008,90	20	11.03.2013	33,7	27,9	n.v.	
RNW 2010 am Richtpegel Dürnstein (DUER): 25.8 dm								
 Anleitung zur Interpretation der Längsprofile für Seichtstellen in der Wachau								

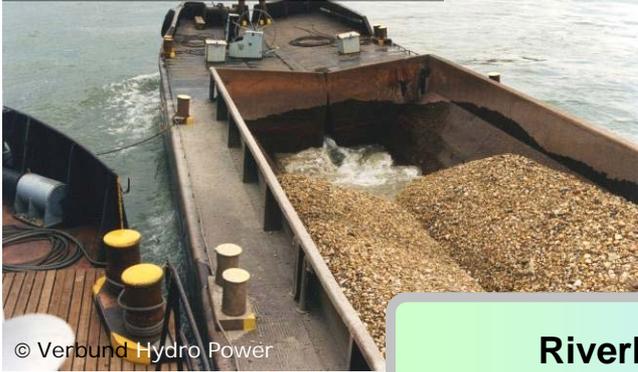
Pilot infrastructure project east of Vienna

- **Duration:** Started in 2012, planned end of works: April 2014
- **Project by:** via donau on behalf of the Austrian Ministry of Transport, Innovation and Technology
- **Aim:** to provide for better environmental and navigational conditions on 3 km long free-flowing pilot stretch
- **Measures begun:** river bank restoration & granulometric riverbed improvement



Project area: river-km 1,921.00 – 1,872.70
Freudenau power plant – AT/SK border

Granulometric riverbed improvement



© Verbund Hydro Power



Riverbank restoration



„Hinterrinner“ / creating islands

Riverbed stability

Improvement of ecological conditions

AIMS

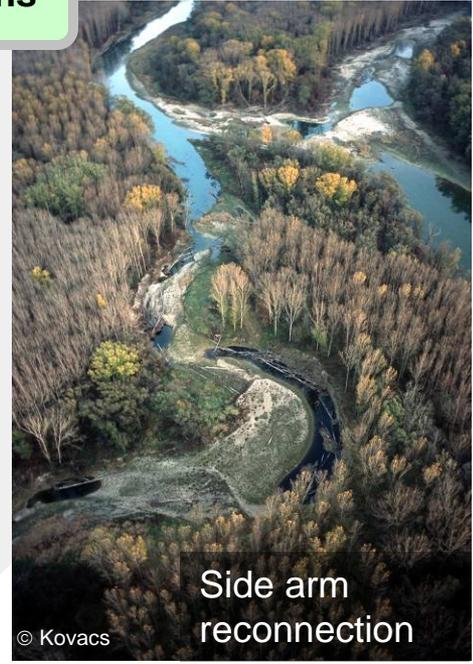
Optimised low water regulation



Improvement nautical conditions



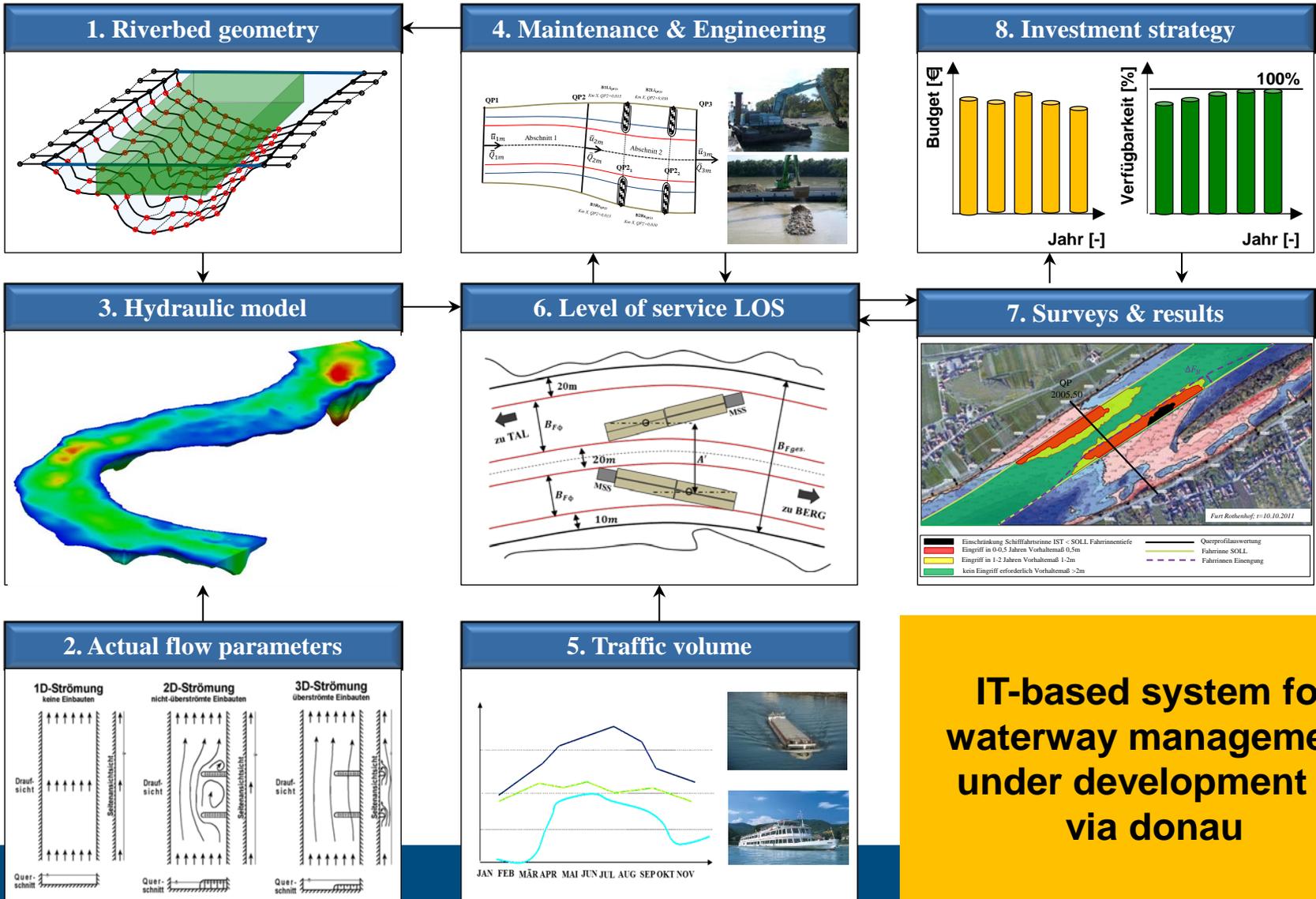
Riverbed adjustments (dredging & dumping)



Side arm reconnection

© Kovacs

Mid-term: Waterway management system



IT-based system for waterway management under development at via donau