viadonau
Guidelines for a demand-oriented berth development in Austria

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Initial situation
Number of berths in Austria

- 399 berths in total
- 126 public
- 273 non-public
Number of public berths in Austria

126 public berths in total

- 61 for cargo and passenger vessels for common purposes
- 40 restricted to specific purposes (waiting berths, emergency berths etc.)
- 25 for small craft
Distance between public berths for cargo and passenger vessels for common purposes

Ø distance berth ↔ berth: 5.1 km

Ø travel time motor cargo vessel upstream: 34 minutes

maximum distance berth ↔ berth: 29 km (in the section East of Vienna)

Ø travel time motor cargo vessel upstream: 4 hours, 8 minutes

→ distances do not reveal anything about the quality of the berths
River bank construction of public berths for cargo and passenger vessels for common purposes

53 x inclined

8 x vertical or partially vertical (thereof 6 x in Vienna)

→ vertical river bank constructions
- few in number
- concentrated in Vienna
Importance of vertical river bank constructions

higher **safety** during berthing process, embarking and debarking of crew and passengers

possibility for **transhipment of a car**

better **accessibility for rescue teams** in case of emergency

better **conditions for realising service features**, e.g. onshore power supply
Car transhipment sites

Currently few possibilities for the transhipment of cars

(limited to berths with a vertical river bank construction)
Onshore power supply

currently no onshore power supply at public berths for cargo and passenger vessels outside of ports
Loaded journeys of motor cargo vessels (dry and tank)

increase of 83 % between 1993 - 2017

→ growing demand for well-equipped berths
Implementation concept for a demand-oriented berth development
Development priorities – Cluster A: Constructional measures

Restoration of damages & continuous preservation monitoring

- focus on berths with vertical river bank construction (highest demand)
  - documentation of damages (frost, collisions etc.)
  - restauration of damages
  - implementation of a monitoring routine to avoid major damages in the future

Upgrade & provision of additional service features

- examining alternatives to inclined river bank constructions (sheet pile walls, dolphins etc.)
- examining possibilities for
  - car transhipment
  - onshore power supply
Development priorities – Cluster B: Traffic management

Demand-oriented limitation of the maximum time allowed for berthing

- focus on attractive and highly frequented berths
  - monitoring of berthing time by transponder signals
  - informing Navigation Surveillance in case of exceedance of maximum time allowed for berthing
  → giving more vessels the possibility to berth

Electronic berth space monitoring & reservation tools

- feasibility analysis and implementation plans for tools helping skippers to plan where and when to berth
  - display of the occupation status of a berth on ENC's
  → enabling skippers to reserve a required berth prior to arrival
Development priorities – Cluster C: Onshore power supply

Demand survey & costs-benefit analysis

- identification of berths
  - with the highest demand
  - where the highest benefit can be expected (e.g. nearby residential areas)
- cost-benefit analysis together with external experts

Strategy and measures for the Austrian Danube

- consideration of the international context regarding technical standards, payment system etc.
  → transnational harmonisation
Development priorities – Cluster D: Financing

Strategy for the total inventory of public berths

- monitoring of usage intensity via transponder signals
- ongoing dialogue with Supreme Navigation Authority and Navigation Surveillance
- consideration of financial and personnel resources

→ prioritisation for future developments in cooperation with Supreme Navigation Authority

Management and charging concept

- consideration of possible future refinancing models (charging of usage of certain berths with additional service features or of particular services at public berths)
Achievements and next steps
List of public berths for cargo and passenger vessels on the Austrian Danube

<table>
<thead>
<tr>
<th>River-km Danube</th>
<th>River bank</th>
<th>Name of the berth</th>
<th>Length (m)</th>
<th>Main sign</th>
<th>Additional information</th>
<th>Width of the berthing area on the water</th>
<th>Max. time allowed for berthing</th>
<th>River bank construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.219.7</td>
<td>R</td>
<td>Freinberg</td>
<td>700</td>
<td>E.6</td>
<td>Liegadauer max. 24h (max. time allowed for berthing 24h)</td>
<td>50 m</td>
<td>24 h</td>
<td>inclined</td>
</tr>
<tr>
<td>2.212.6</td>
<td>R</td>
<td>Untere Laende Esternberg</td>
<td>400</td>
<td>E.5.1</td>
<td>ausgenommen Kleinfahrzeuge (small craft excluded)</td>
<td>40 m</td>
<td></td>
<td>inclined</td>
</tr>
<tr>
<td>2.199.6</td>
<td>R</td>
<td>Klosterfeld</td>
<td>780</td>
<td>E.5.1</td>
<td>ausgenommen Kleinfahrzeuge (small craft excluded)</td>
<td>50 m</td>
<td>24 h</td>
<td>inclined</td>
</tr>
<tr>
<td>2.184.7</td>
<td>R</td>
<td>Inzei</td>
<td>750</td>
<td>E.5.1</td>
<td>ausgenommen Kleinfahrzeuge (small craft excluded)</td>
<td>50 m</td>
<td>60 h</td>
<td>inclined</td>
</tr>
<tr>
<td>2.178.1</td>
<td>L</td>
<td>Obermühlen</td>
<td>270</td>
<td>E.5.3-3</td>
<td>ausgenommen Kleinfahrzeuge (small craft excluded)</td>
<td>30 m</td>
<td></td>
<td>vertical</td>
</tr>
<tr>
<td>2.162.7</td>
<td></td>
<td>Lock Aschach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.159.9</td>
<td>R</td>
<td>Öffentliche Lände Aschach</td>
<td>520</td>
<td>E.5.1</td>
<td>ausgenommen Kleinfahrzeuge (small craft excluded)</td>
<td>30 m</td>
<td></td>
<td>inclined/vertical</td>
</tr>
<tr>
<td>2.150.1</td>
<td>R</td>
<td>Aschach</td>
<td>4.078</td>
<td>E.5.1</td>
<td>ausgenommen Kleinfahrzeuge</td>
<td>50 m</td>
<td></td>
<td>inclined</td>
</tr>
</tbody>
</table>

- **showing most important information** about berths (location, length etc.)
- **publication** on
  → enabling skippers to
  - plan their berthing
  - find alternative berths nearby in case berth of 1st choice is blocked
Information tool for monitoring berthing duration

- monitoring of the berthing via transponder signals at berths with a limited time allowed for berthing in Linz and Vienna
- e-mail-notification to Navigation Surveillance in case of exceedance of maximum time allowed for berthing

→ avoidance of blockage of highly frequented berths
Traffic management – quick wins
(cooperation with Supreme Navigation Authority)

Limiting maximum time allowed for berthing to 48 hrs. at berths with a vertical river bank construction (excluding tank berths)

→ avoiding blockage of highly frequented berths

Redesignation of the former Öffentliche Fahrgastlände (formerly exclusively dedicated to passenger vessels)
• now also allowed for cargo vessels
• new name: Brigittenau III
→ provision of an additional berth with vertical river bank construction for cargo vessels
Examination of damages on berths with vertical river bank constructions in Vienna

• documentation of damages due to frost, collisions, vegetation etc.
• underwater survey
• cost-estimation for necessary restorations

→ decision basis for berth restorations
Feasibility study on the upgrade of berths in Linz and Vienna

examination and assessment of alternatives to inclined river bank constructions in Linz and Vienna
  o sheet pile walls
  o dolphins with pontoon
  o dolphins with landing-stages including possibilities for
    o the transhipment of cars
    o onshore power supply

→ decision basis for a future berth upgrade
→ detailed design of berth and application for required permits in 2019
Constructional measures

Traffic management

Demand-oriented berth development

Financing

Onshore power supply
End of the presentation – Question session

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