

# The Implementation Potentials of BIM in Bridge Maintenance Workflows



#### BUILDING AND DESIGN

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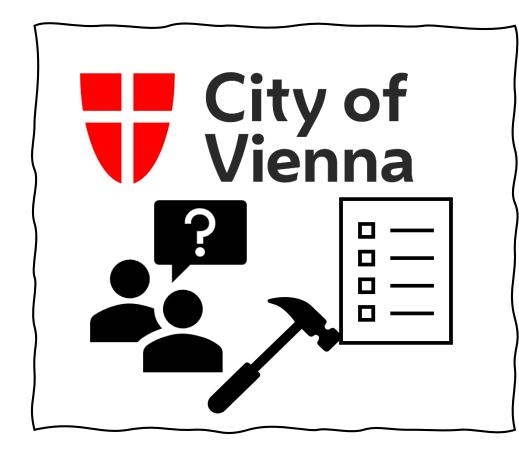
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### 2. ACTUAL process definition

- Preparation and Inspection analog
- Documentation
  digitized

### Implementation concept

#### 1. Data collection



- Capturing
  - Interviews
  - Monitoring in the field
- Analysis

#### PREPARATION

review of analog and digitized documents (previous inspection/control protocols, as-built drawings) & equipment preperation

Figure 1. Actual workflow

#### ACTUAL WORKFLOW

**EXECUTION** 

(INSPECTION)

inspection documents:

printed inspection

protocols,

defect-marking on

printed as-built

drawings

basis for the next inspection

#### DOCUMENTATION

digitization of the analog inspection documents (inspection protocols, as-built drawings)



- · Central information hub for data capturing and storage
- Transparency and availability during the life cycle
- => BUILDING INFORMATION MANAGEMENT

# 4. Definition of the BIM-based TARGET process

## 5. Testing in simulation on a pilot project



Figure 3. Pilot project "Drascheparksteg" (above) & PlanRadar as BIM-Management platform (below)

6. Iteration and improvement

# BIM-based inspection software EXECUTION (INSPECTION)

digitalized defect-marking on the BIM-model & automatically generated inspection protocols

> BIM WORKFLOW

basis for the next inspection

Preparation,
 Inspection and
 Documentation

 digitalized

#### **DOCUMENTATION**

the information in the BIM-based software application is automatically saved/stored & functions as a basis for the next inspections

Figure 2. BIM workflow

**PREPARATION** 

review of the digitalized

information in the BIM-

based inspection sofware

(previous inspection

protocols, BIM-data)

+ equip. preperation

### 7. Finished BIM-based TARGET process

Conclusion

**Potentials** of the application of **BIM** for **bridge inspections** are **recognizable**