

OPERATIVE ASSET MANAGEMENT

BEST PRACTICE

Fölster | 30. November 2020

IMPLEMENTATION OF ASSET MANAGEMENT IN NETWORK O+M

2

ESTABLISHMENT OF A MORE STRATEGIC OPERATIVE ASSET MANAGEMENT AT HAMBURG WASSER AROUND 15 YEARS AGO

- Introduction of an unit „Asset Management“ which took the role of ownership within the department of Network Management
 - O+M Strategies
 - Rehabilitation Strategies
 - Investment Strategies
 - Technical and financial controlling

Target:

Keeping up the value and the function of our assets

AGENDA

3

1 INTRODUCTION

2 O+M AS PART OF ASSET MANAGEMENT

3 GUIDING QUESTIONS OF AM

4 IMPLEMENTATION

5 ADAPTION

ASSET OPERATION AND MAINTENANCE

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British Standard BS 3811:1993 “Glossary of Terms in Terotechnology” finally defined ‘Maintenance’ as – **“the combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function”.**

- OPERATION AND MAINTENANCE (O&M) FUNCTIONS RELATE TO THE **DAY-TO-DAY RUNNING AND UPKEEP OF ASSETS**
- ARE PARTICULARLY RELEVANT TO **SHORT-LIVED DYNAMIC ASSETS** (SUCH AS PUMPS/VALVES) WHERE DETERIORATION THROUGH LACK OF REGULAR MAINTENANCE MAY RESULT IN RAPID FAILURE.
- PROPERLY OPERATING AND MAINTAINING ASSETS IS **CRITICAL TO THE SUCCESS OF THE OVERALL PERFORMANCE.**
- OPERATION AND MAINTENANCE IS DIRECTLY LINKED TO **LEVEL OF SERVICE AND CRITICAL COMPONENTS.**

GUIDING QUESTIONS FOR THE AM - PROCESS

5

What do I own?

- Assessments of assets

Where are my assets?

- Location and system map

What is the condition of my asset?

- Assessment of condition and rating

What is the remaining life of my assets?

- Assessing remaining useful lifetime (year of construction - expected lifetime by consulting projected-useful-life tables or decay curves)

What is value of my assets?

- Determining asset values and replacement costs.
- Longterm Investment planning (Decision for repair/rehabilitation /exchange)

**Asset
Inventory**
(in
GIS/Finance)

**Asset
Lifecycle
Management**

GUIDING QUESTIONS FOR THE AM - PROCESS

6

***What do our
assets
need?***

- Maintain function and value of asset
- Keep/extend expected lifetime

Asset Operation +
Maintenance
Strategy

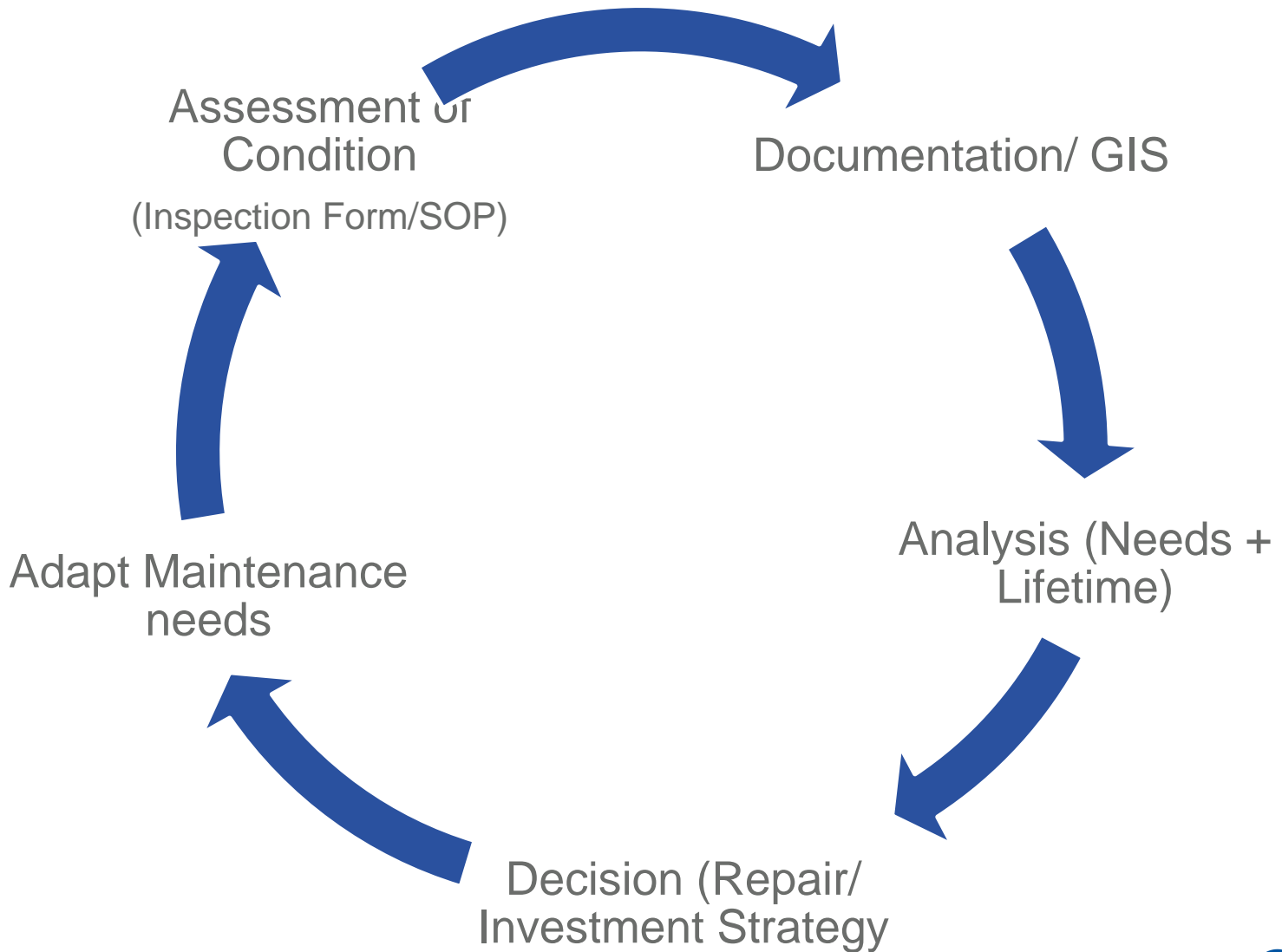
***When are
we doing
it?***

- Scheduling planned activities and coordinate within network activities
- Plan Ressources and Equipment

Asset Operation +
Maintenance
Schedule

LIFECYCLE MANAGEMENT

7



3

➤ Assessments of assets

➤ Location and system map

Asset Inventory (in GIS/Finance)

GUIDING QUESTIONS FOR THE AM - PROCESS

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What is the remaining life of my assets?

What is value of my assets?

- Assessing remaining useful lifetime (year of construction - expected lifetime by consulting projected-useful-life tables or decay curves)
- Determining asset values and replacement costs.
- Longterm Investment planning (Decision for repair/rehabilitation /exchange)

Asset Lifecycle Management

Strategic Rehabilitation:

- Failure Analysis
- Classification of condition

Funktionen		funktionsrelevante Schäden S = 0015 - 0022	
alle Funktionen	VIP Armatur	1	
Trennt Druckzone	Druckzonen Armatur	1	

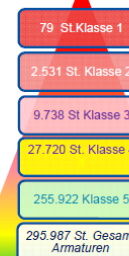
Funktionen	funktionale Schäden	Funktions- beeinträchtigende Schäden	untergeordnete Schäden
	S = 0015 - 0022	S = 0010 – 0013; 0029; 0001	S = 0003 -0009; 0031; 0031
Entleerung	2	3	4
Entlüftung	2	3	4
Trennt Anschluß	3	4	4
Trennt Hydrant	2	3	4
Trennt Netzleitung	2	3	4
Trennt Druckzone		3	4

Keine Schäden	
alle Funktionen	5

PRIORISIERUNG INSTANDSETZUNG ARMATUREN



Armaturen



Hydranten



GUIDING QUESTIONS FOR THE AM - PROCESS

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***What do our
assets
need?***

- Maintain function and value of asset
- Keep/extend expected lifetime

**Asset Operation +
Maintenance
Strategy**

Example Strategy for Water network

Assets	Activity	Zyklus
Leak detection	Network is checked for leakages	5 Years
Control of valves	Valves are checked in position and function	8 Years
Control of hydrantes	Hydrants are checked in position and function	4 Years
Control of assets in external property	If assets are in areas which are not public, their access and needs to be checked	1 Year
Dienstbarkeiten	Nichtöffentliche Flächen, welche das eigene Netz überdecken, werden auf Zugänglichkeit kontrolliert.	1 Year
Controll of pressure zone valves	Condition and function (position)	1 Year

GUIDING QUESTIONS FOR THE AM - PROCESS

When are we doing it?

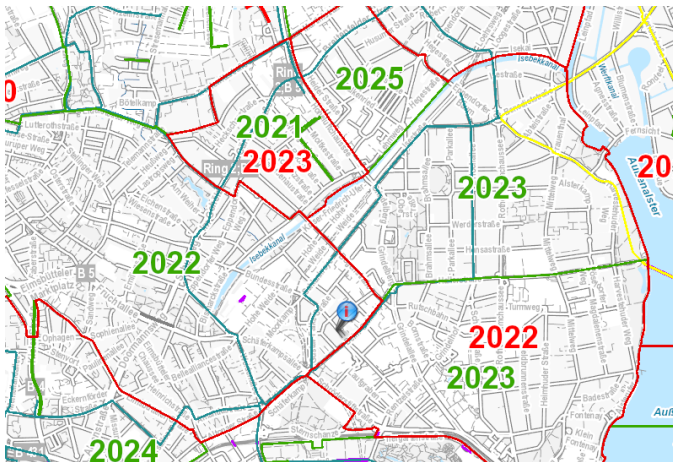
- Scheduling planned activities and coordinate within network activities
- Plan Ressources and Equipment


Asset Operation + Maintenance Schedule

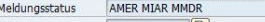
- Example for scheduled preventive Maintenance schedule Leak detection and Control of valves

- Assessment of repair needs

- Listed Work Orders




IH-Störung ändern: Störung ändern NW



Meldung W1

Meldungsstatus

Auftrag

Störungsaufnahme Schadensbilder Maßnahmen Ursachen Ergänzende Angaben

Sachverhalt

Beschreibung

30.03.2016 12:37:19 RFC_GIS (RFC_GIS)
Störungsort: Mühlenweg 24
Störung: AV schließt nicht 10:25
Meldender: Fa Gerhard Engwl 01627993236
weitergegeben an: E-Dienst Deoliveira
30.03.2016 13:08:51 Frank Amundsen (AMUNDSEN)
Fa hat die Al gekappt aber der AV schließt nicht,nun Wasserandrang in Baugrube,E-Dienst hat versucht den AV nachzuschließen,nicht möglich da

Störungsdaten

StörBeginn
Störungsende

Zuständigkeiten

Planergruppe / 1000 Netz Mitte
Verantw.Arbeitspl. / 1000 Netzsteuerung Mitte
Meldender

Bezugsobjekt

Techn. Platz Armaturen
Equipment AV24

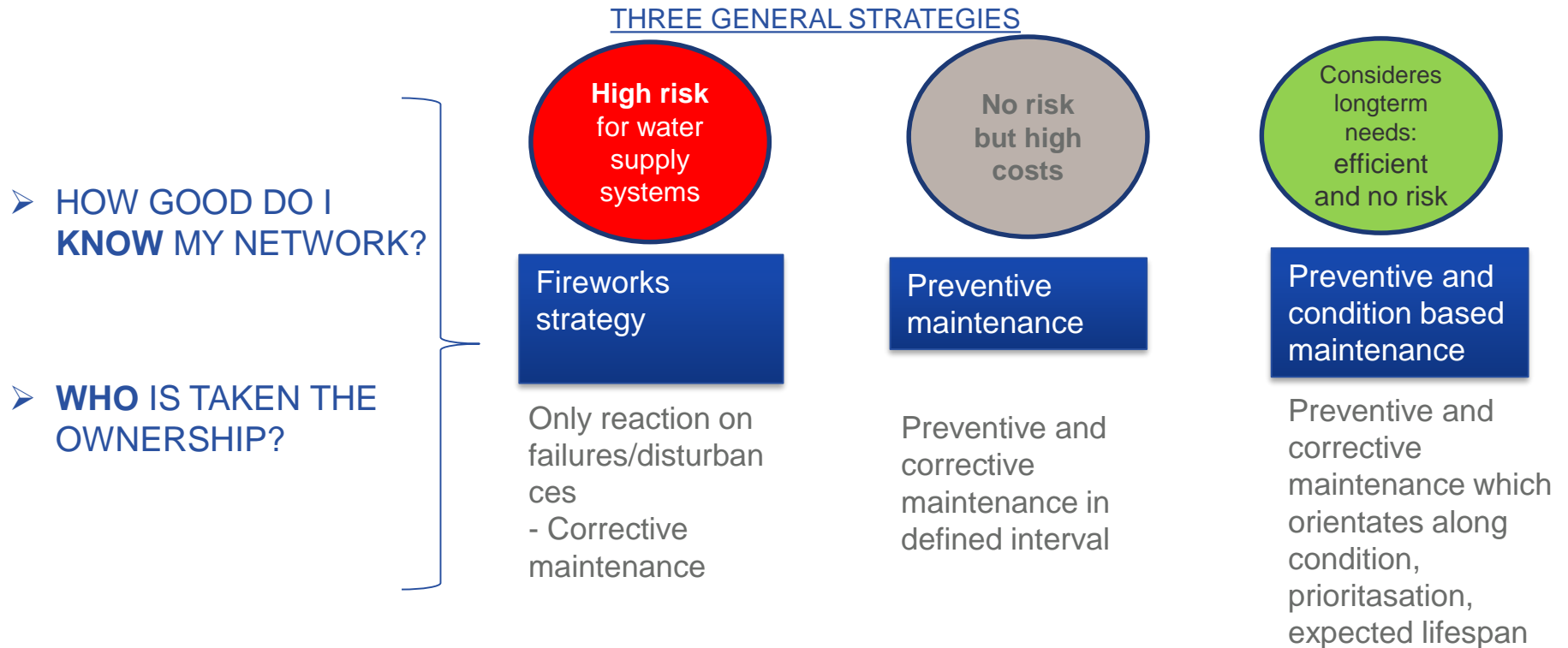
Priorität

Priorität

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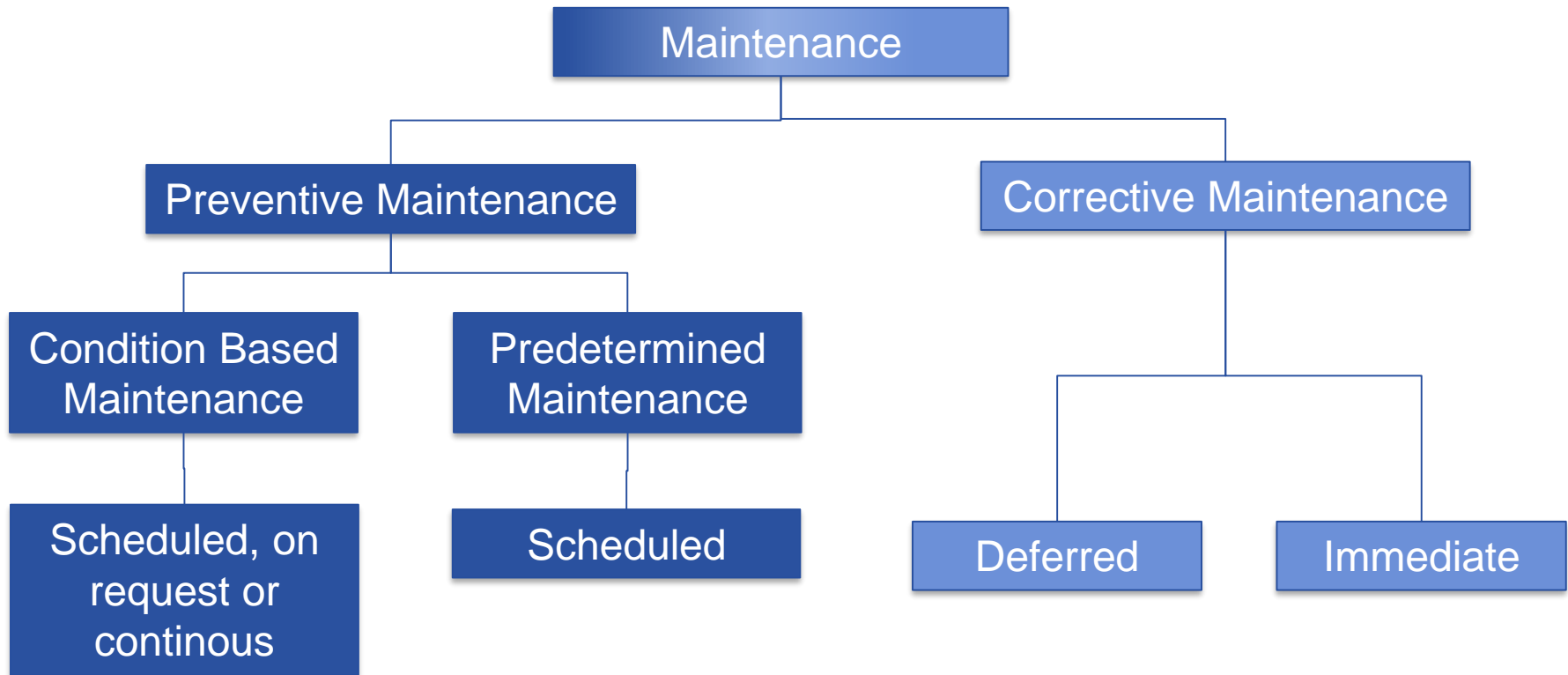
FINDING A STRATEGIE

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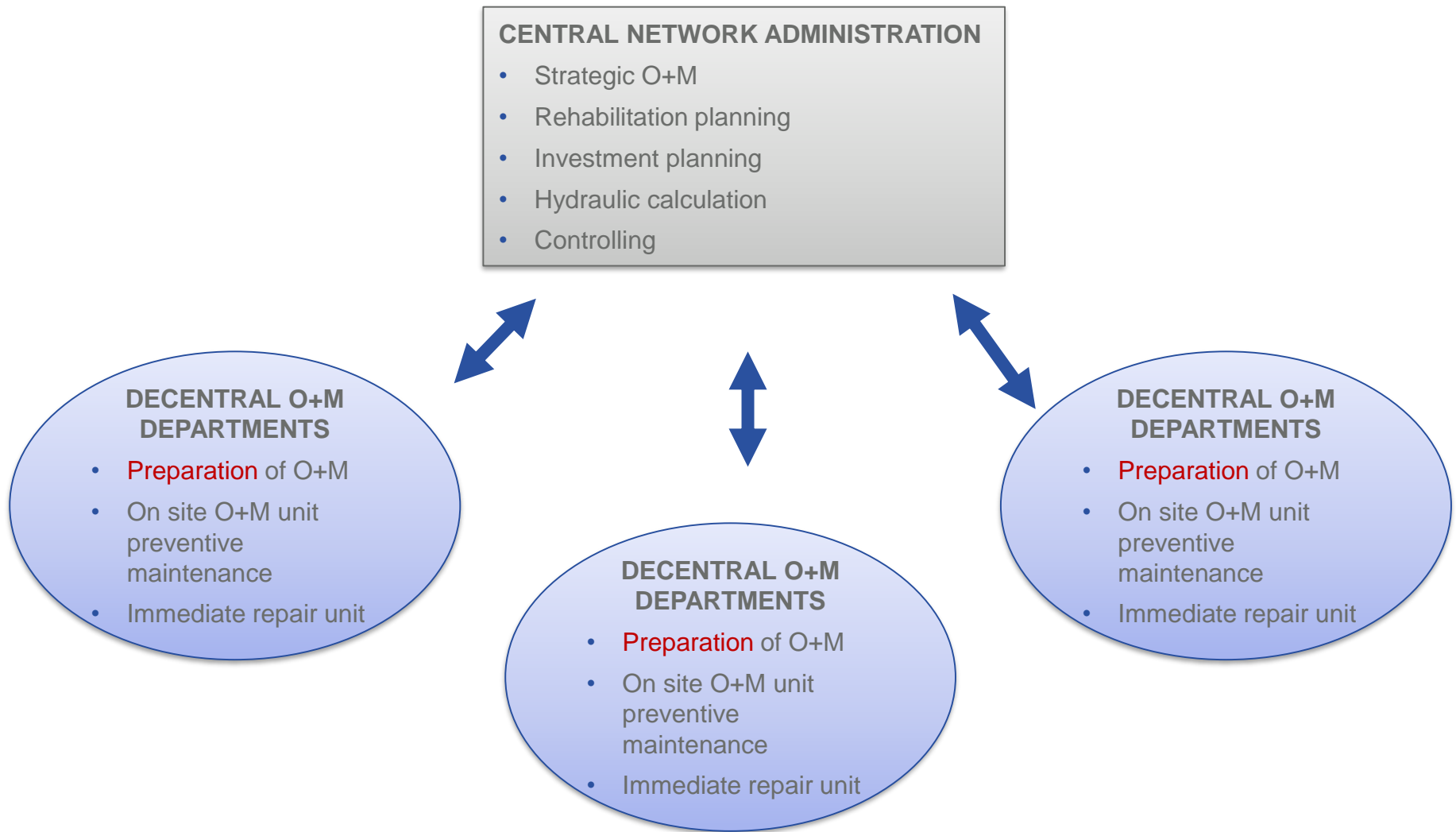


DEFINITIONS OF MAINTENANCE

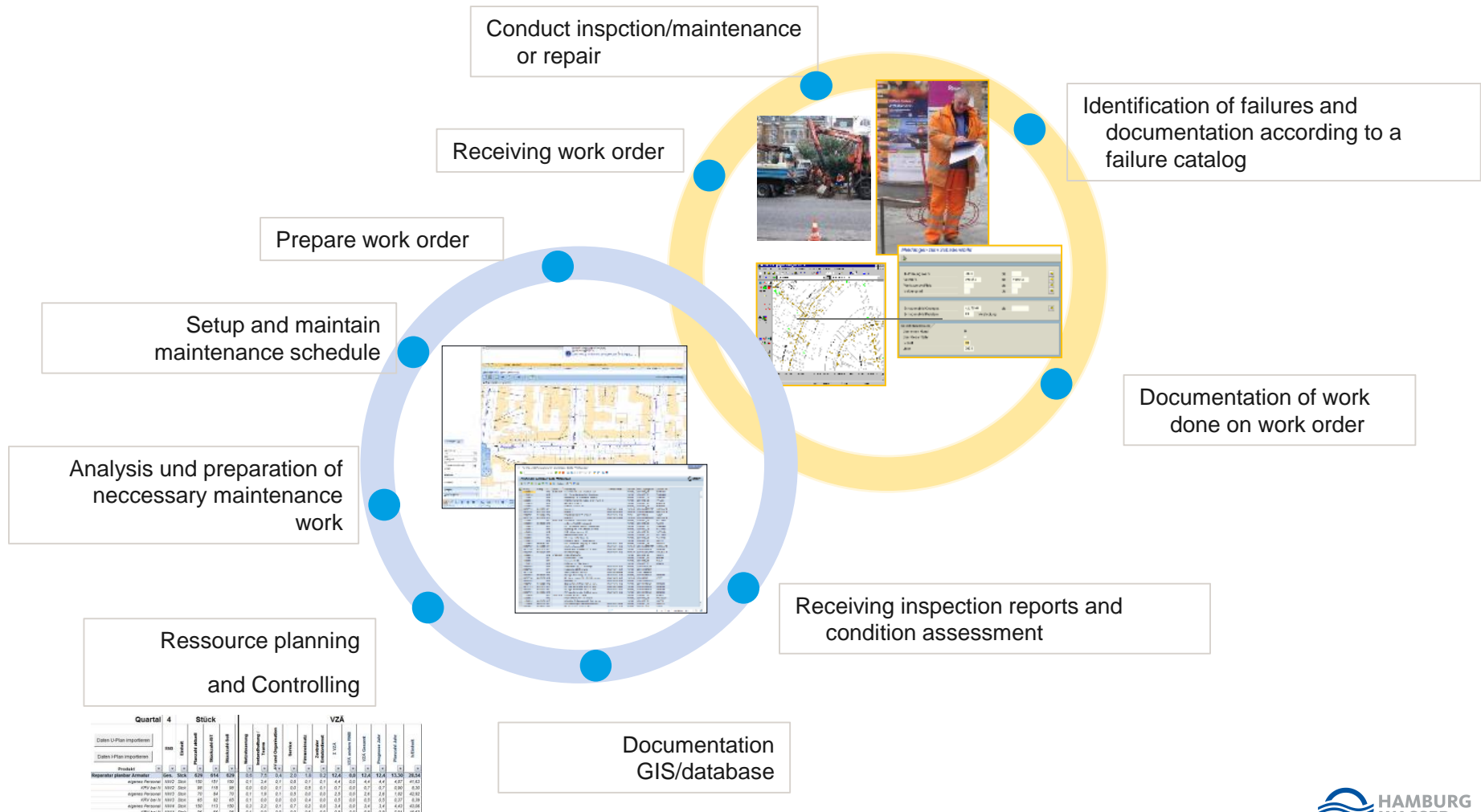
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ORGANISATIONAL PRINCIPALS OF THE NETWORK MANAGEMENT DEPARTMENT AT HAMBURG WASSER



WHO: Documentation and preparation ↔ Repair and Maintenance units



Quartal 4		Stück		VZA															
Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren		Daten 1-Plan Importieren	
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THANK YOU FOR YOUR ATTENTION

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