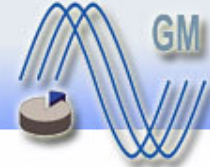
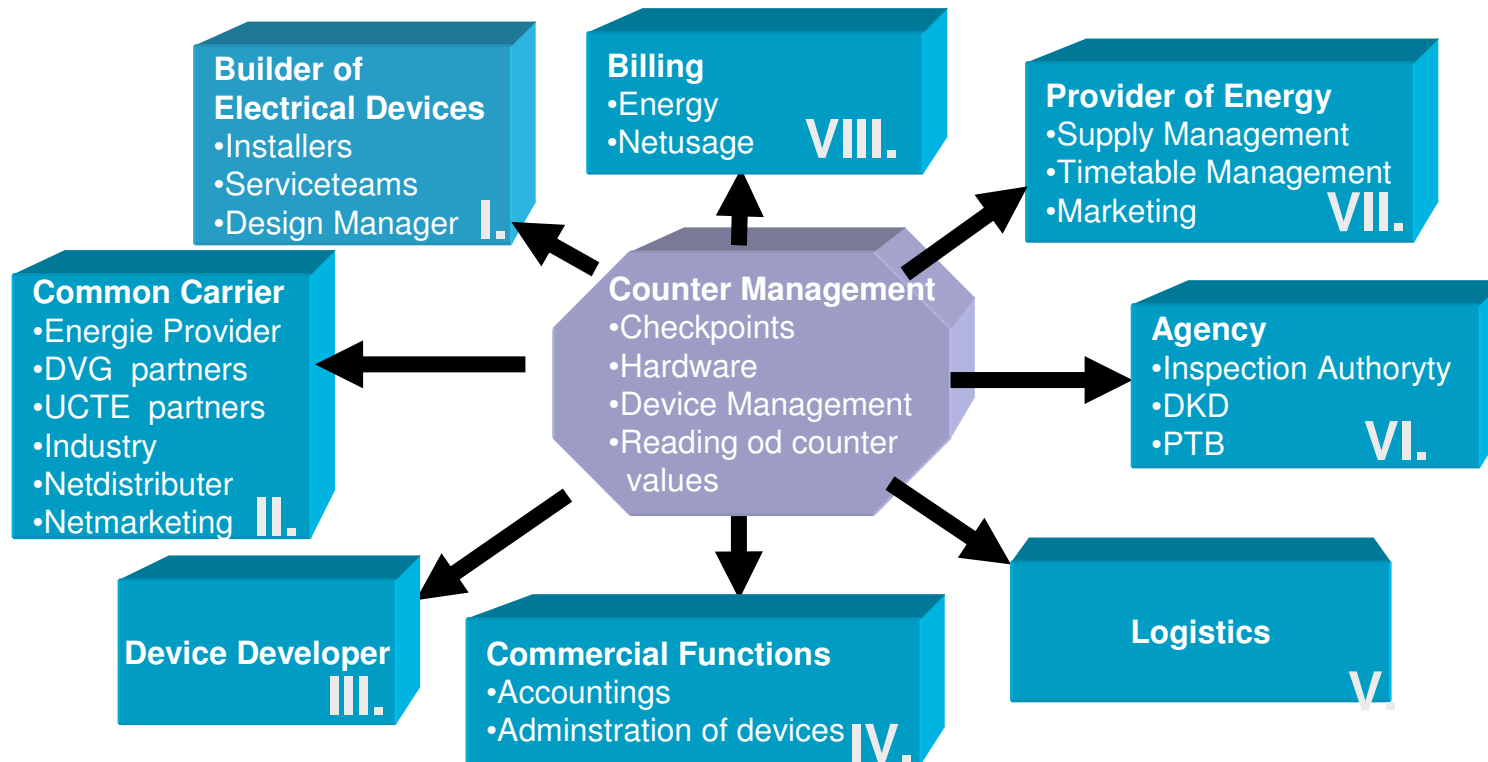


## Equipment management system (GM)



- The deregulation of the electricity market requires a new orientation of all participating users. They have to move away from traditional business models to get a simplified workflow according to the arrangement of the association II+. The equipment management achieved an own standard between provider, distributor and customer.
- The equipment management has to provide the customer service in market related conditions.
- Furthermore, all market partners have to be supported neutral and without any evaluation.

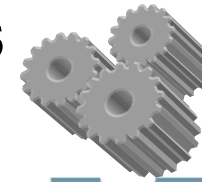


- I. Locations, Metering Count Description, equipment, service tasks
- II. Locations, Metering Count Description, equipment, read values
- III. Equipment, documents of delivery, technical specifications
- IV. Capital assets, environment of order (for example SAP), budget management, controlling
- V. Equipment, documents of delivery
- VI. Calibration data, validity, admissions, authorizations, regulations, samples
- VII. Locations, Metering Count Description, energy amount / read values
- VIII. Energy amount / read values, Metering Count Description, equipment

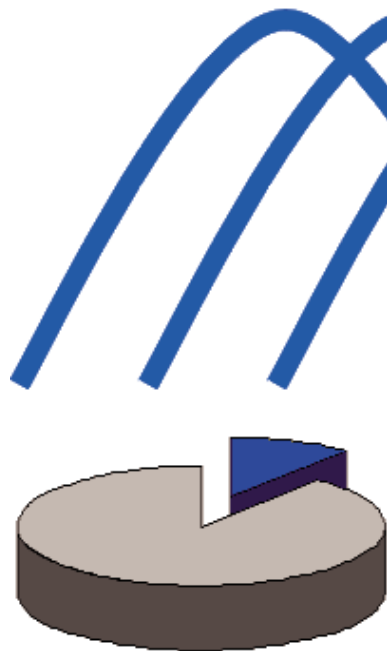


NetDV has gained specialized know how during many years of experience in the energy market. The application “equipment management” fulfils all demands on a modern equipment management. The system can be used flexible, it is easy to handle and due to the arrangement associations II+ the “equipment management supports all common and future standards in the energy market.

## Professional functions



GM



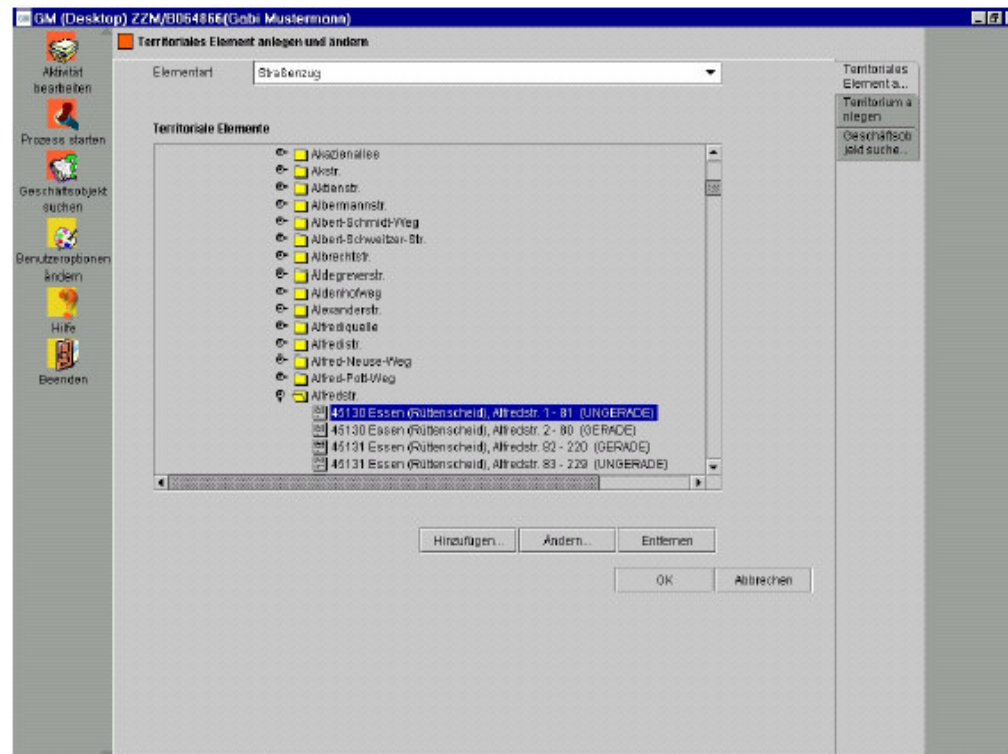
- ✓ Professional functions
- ✓ Analysis
- ✓ MDE-offline (independent construction tool)
- ✓ MDE-online (direct processing tool)
- ✓ Interfaces
- ✓ Client ability
- ✓ Cycle
- ✓ Samples
- ✓ Service tasks
- ✓ Warehouse stock administration
- ✓ Network stock administration on “ZpB”-basis
- ✓ Item definition
- ✓ Business partner administration
- ✓ Flexible display of territories and networks



The territory concept of the “equipment management” provides the basis for displaying territories by using the postal and political structure of Germany implementing the content of the “Postal CD-ROM”.

Therefore the territory concept guarantees the maintenance and the conversion as well as the import of postal data into the system.

Furthermore, all included postal addresses are automatically verified.





NetDV gives you the opportunity to administrate your business partners using the equipment management tool. You can register any natural persons or corporate bodies. All relevant information concerning the business partners (postal addresses, phone numbers, E-mail-addresses etc.) are acquired and administrated.

The screenshot shows a Windows-style application window titled 'GM (Desktop) ZZN/8064866(Gabi Mustermann)'. The main window is titled 'Geschäftspartner anlegen und ändern'. On the left, there is a vertical toolbar with icons for 'Aktivität bearbeiten', 'Prozess starten', 'Geschäftsobjekt suchen', 'Benutzeroptionen ändern', 'Hilfe', and 'Beenden'. The main area contains a form with the following fields:

- Art:** Herr (dropdown menu)
- Geschäftspartner:** Mustermann, Dr. h. c. Hans von, 45130 Essen, Rütterscheid, Rosenstr. 29
- Nummer:** 032698614
- Geschäftspartner:** A tabbed interface with 'Weiteres' and 'Adressen' tabs. The 'Name' field is highlighted in yellow.
- Name:** Mustermann
- Vorname:** Hans
- Namenszusatz:** von (dropdown menu)
- Geburtsdatum:** 11.11.1911 (dropdown menu)
- Geburtsort:** Essen
- Beruf:** DV-Beraterin (dropdown menu)
- Berufstitel:** Professor (dropdown menu)
- Akad. Titel:** Dr. h. c. (dropdown menu)

At the bottom of the form, there are buttons for 'Notiz...', 'Dubletten suchen...', 'OK', and 'Abbrechen'. On the right side of the window, there are two buttons: 'Geschäftspartner Muste...' and 'Geschäftsobjekt suche...'.



The equipment management tool offers you the potential to administer certain types of devices, accessories, loading equipment and assemblies in form of technical descriptions of physically linked single components.

Additionally, you are able to define new types of components and to compile their attributes.

There is the possibility for certain kinds of equipment to compile multiple components; an electricity meter can for example contain an electricity test port, movement and one or more electricity counters. This allocation of single components is unrestricted to the greatest possible extent.

You herewith get the possibility to display future innovations for example on the field of multifunctional equipment. Starting from defined article types additional types can created and amended. All individual data such as parameterization and connection to other objects (residence, damage notification) can be illustrated.

Administration of articles, types, components, loading equipment and assemblies is made by itemization. This fact ensures that relevant data only exists in the period starting from creation of an article until scrapping it.



## Equipment

You can administrate all equipment which are necessary to determine an EDU`s consumption. Hereunto especially belong meters, registry equipment, converters and control units.

GM (Desktop) ZM A/R054856(Gabi Mustermann)

**Artikeltyp anlegen und ändern**

Typvorlage: GerStehyp Ändern...  
 ID: 26543  
 Typbezeichnung: GerStehyp Strom  
 Materialnummer:  Tauschgruppe: ?  
 Einzelnachweis

Grafik... Lagerbestände...

GerStekomponenten | Zählerwerke | Zubehörfwartung | Bewertung | Fremdschlüssel  
 Gerätedaten | **Allgem. Daten** | Herst./Lieferant

**Wartungsinformationen**

Mit Eichung  Mit Prüfung  keine Eichung/Prüfung  
 Eichgültigkeit: 8 Jahre Wartungsintervall:  Monate  
 Verlängerung der Eichgültigkeit: 5 Jahre Zählerkonstante:   
 Maximale Anzahl Verlängerungen: 3  
 PTB Bauarten-Zulassung:   
 Übersicht Notenschlüsse und Wandlereinheiten:

Geräteart:   
 Ausprägungen:

OK Abbrechen



## Accessories

Accessories (clamp covers, batteries etc.) are administrated summary and -in case required- through itemization (board of counter montage).

The screenshot shows a software window titled "GM (Desktop) Z2M A/R064066(Gabi Mustermann)". The main area is titled "Artikeltyp anlegen und ändern".

**Form Fields:**

- Typvorlage: Zubehörtyp
- ID: 28542
- Typbezeichnung: Zubehörtyp
- Materialnummer: (empty)
- Tauschgruppe: ?
- Einzelnachweis
- Buttons: Grafik..., Lagerbestände...

**Navigation Tabs:** Allgem. Daten, Herst./Lieferant, Bewertung, Fremdschlüssel

**Description:** Test Anlagen Zubehörtyp

**Zubehörart:** Zählerwechseltafel

Aggregat

**Einbaulage:** Senkrecht

**Materialart:** Blech

**Einbauart:** C-Schiene

**Gefahrt - KZ:** (empty)

**Abmessungen/Gewicht:**

Höhe	1000	mm
Breite	1500	mm
Tiefe	1000	mm
Gewicht	7500	g

**Betriebsdaten:**

Betriebs-temperatur von		°C
Betriebs-temperatur bis		°C
Schutzart	?	
Wartungsintervall		Jahre
Lebensdauer		Jahre

Buttons: OK, Abbrechen



## Loading equipment

Loading equipment (grating boxes, boards) in the inventory stock is used as container for articles. You get the possibility of any nesting profundity.

**Artikeltyp anlegen und ändern**

Typvorlage: Ladungsträgertyp

ID: 26541

Typbezeichnung: Ladungsträgertyp

Materialnummer:  Tauschgruppe: ?

Einzelnachweis

Algem. Daten | Herst./Lieferant | Bewertung | Fremdschlüssel

Beschreibung: Test Anlegen Ladungsträgertyp

Ladungsträgerart: ?

**Abmessungen/Gewicht**

Höhe: 1000 mm

Breite: 1500 mm

Tiefe: 1000 mm

Gewicht: 7500 g

**Innermaße**

Höhe: 800 mm

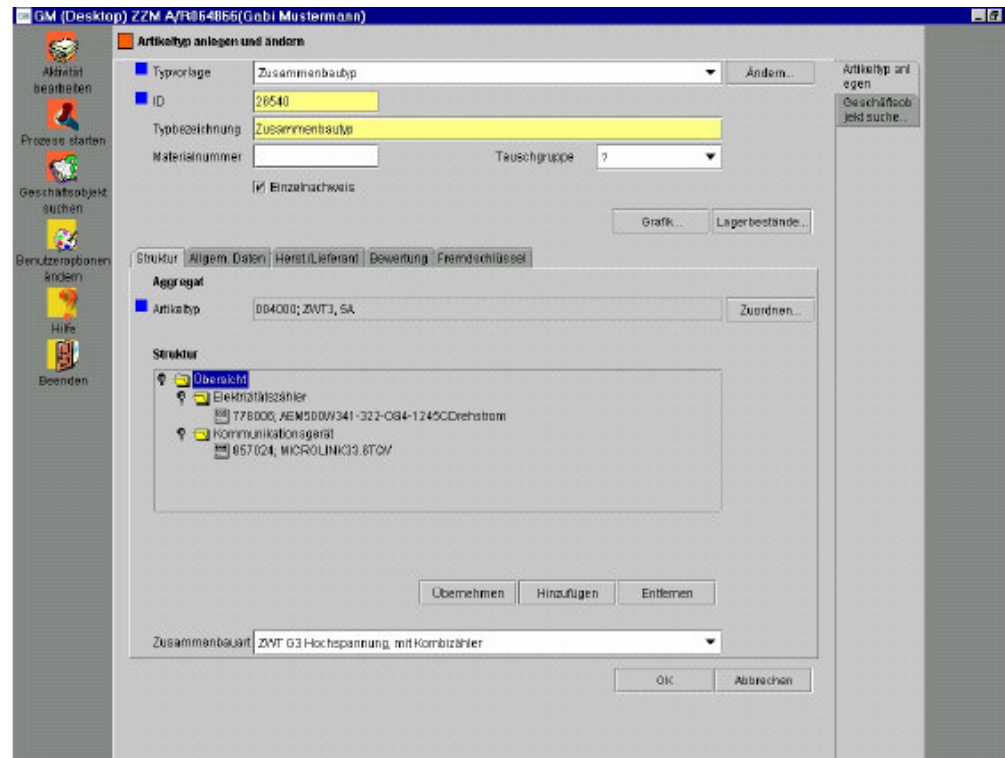
Breite: 1400 mm

Tiefe: 900 mm



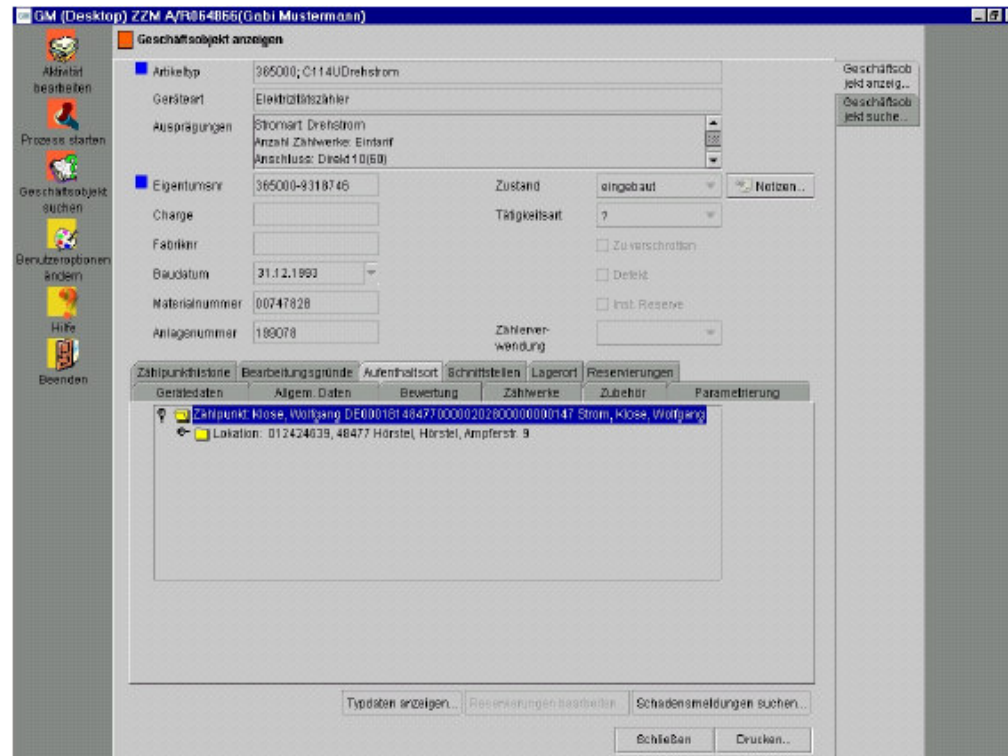
## Assembly

You are offered the possibility of administering multilevel parts lists, which implement a measuring function as an unit. Assemblies are administered in the storehouse and in the network as unit with itemization and are addressable through every single article of the assembly.



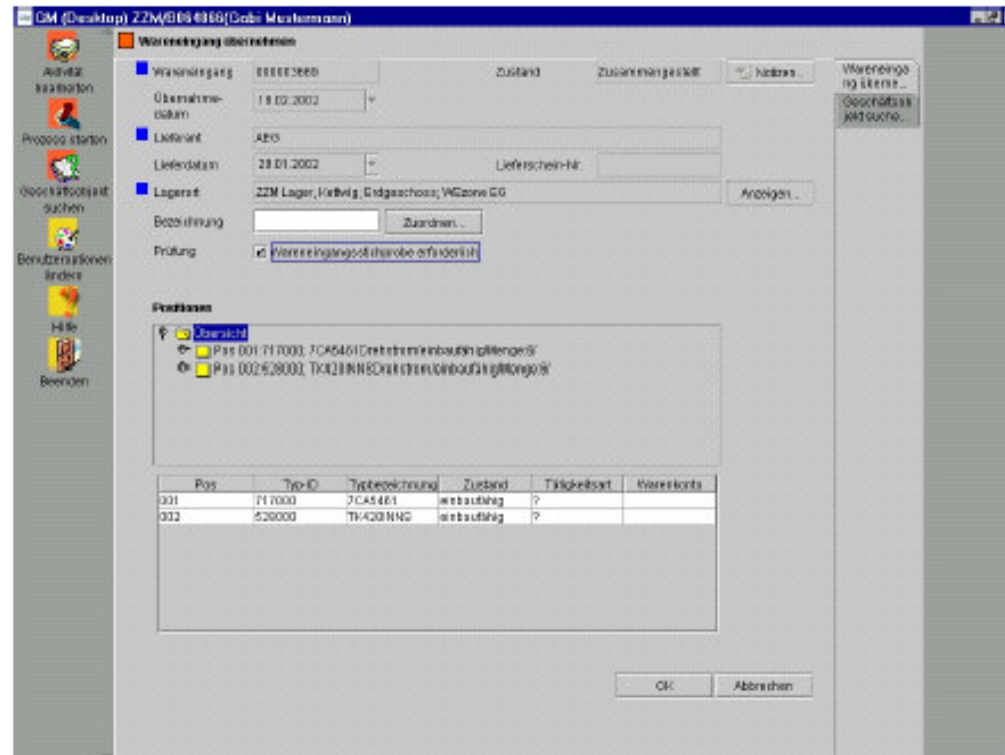


Using the “equipment manager” enables the administration of networks, locations and reading points in a way that the equipment and the assemblies are integrated into supplying networks. The networks are acquired with their associated geographical extension by means of the territory concept. The assembling occurs based on reading points (according to the metering code). Interruptions and prosecutions of the power supply are indicated as well. Moreover, meter readings at assemblies are detected and forwarded to billing systems over pre-defined interfaces. Own as well as external articles can be administrated.

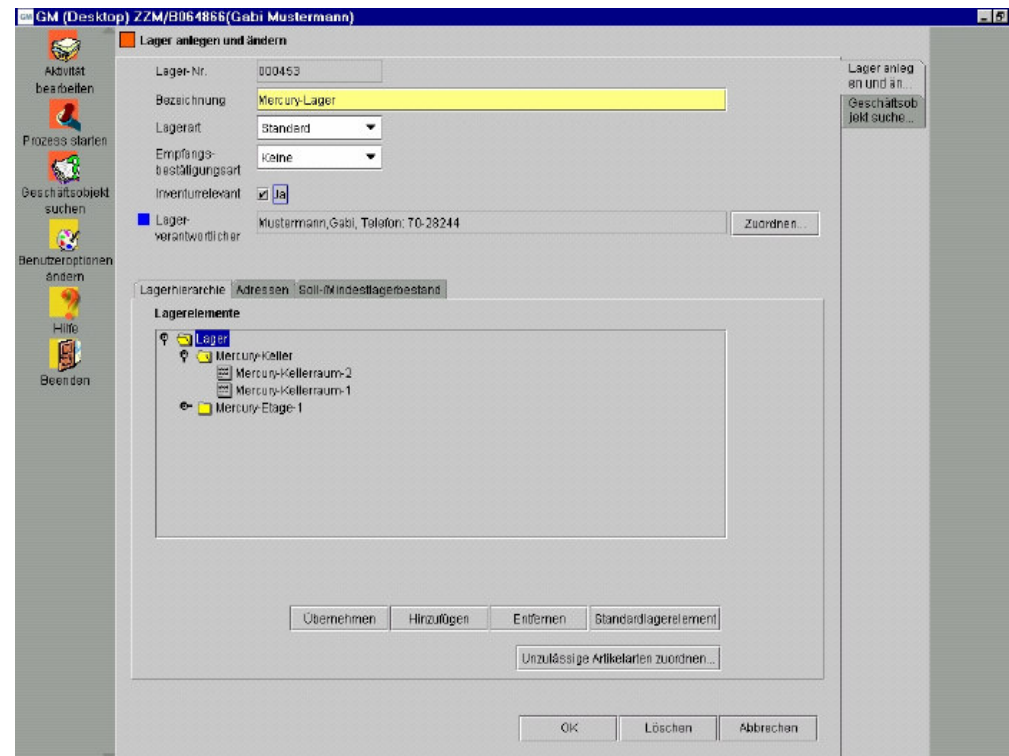




The “equipment manager” allows - in line with the storehouse organization - to define storehouse structures and to evaluate the inventory stocks on every structure level. Storehouses in direct access and others which are located at customers or suppliers (redeliveries expected) are administrated. Own as well as external articles can be administrated.

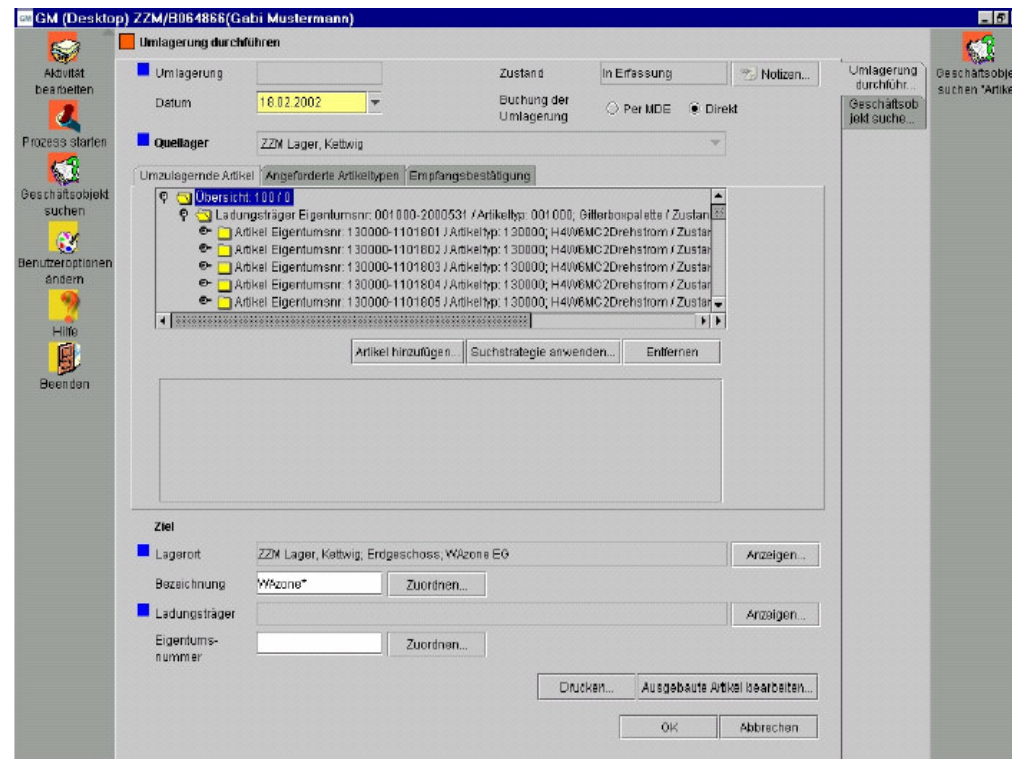


To simplify the processing receipts of goods can be generated from data files which are, for example, provided by a manufacturer while delivering. The receipt of goods creates a single verification in the system.

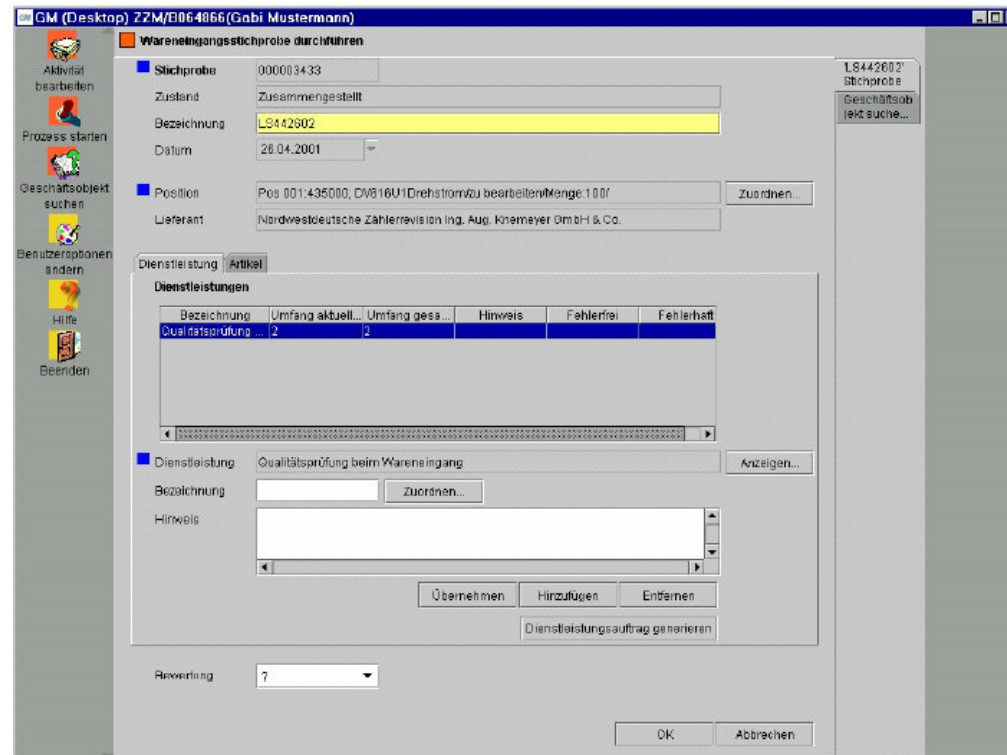


Shipments can be exported as data files. In case a shipment to an organisational unit within the GM- database occurs, a complimentary receipt of goods will be created at the recipient following the release from the shipping department.

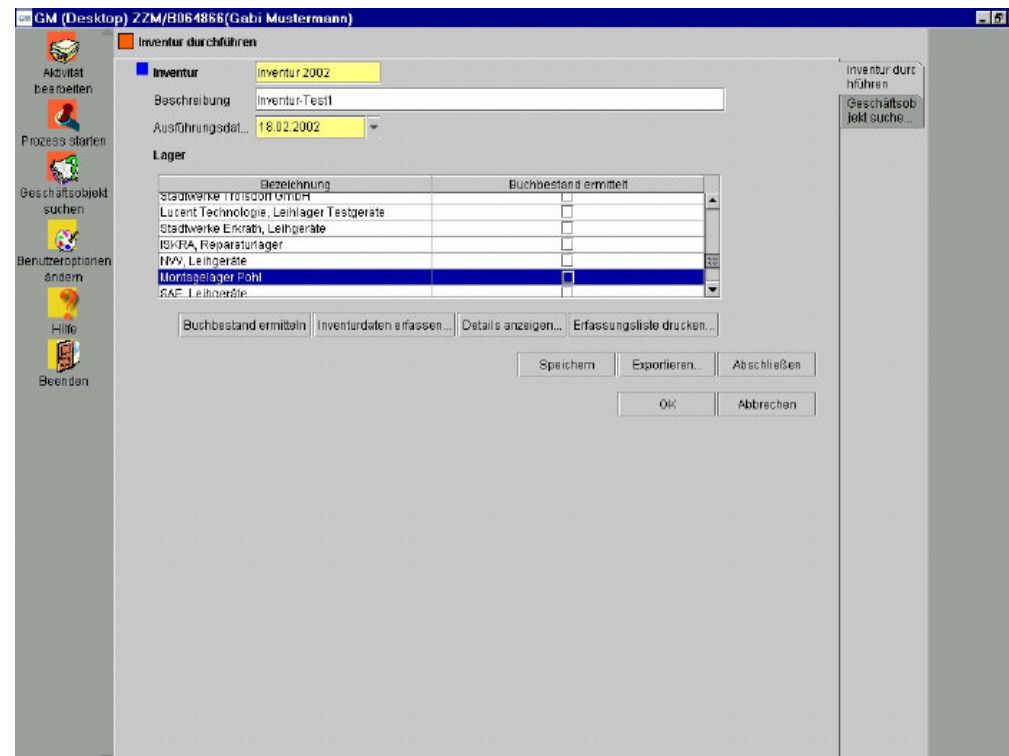
Stock transfers within a storehouse and between storehouses of an organisational unit of the client occur without shipment / goods receipt but by stock transfers.



Furthermore, the system gives you the alternative to carry out random sampling of received goods for quality assurance purposes. A direct interface to the order administration exists to create inspection orders.



All business processes in the field of equipment movement within and between a client's storehouses are supported by an online- MDE- solution via data radio. The conduct of a physical inventory for articles that are listed on a single verification basis, this procedure is also feasible.



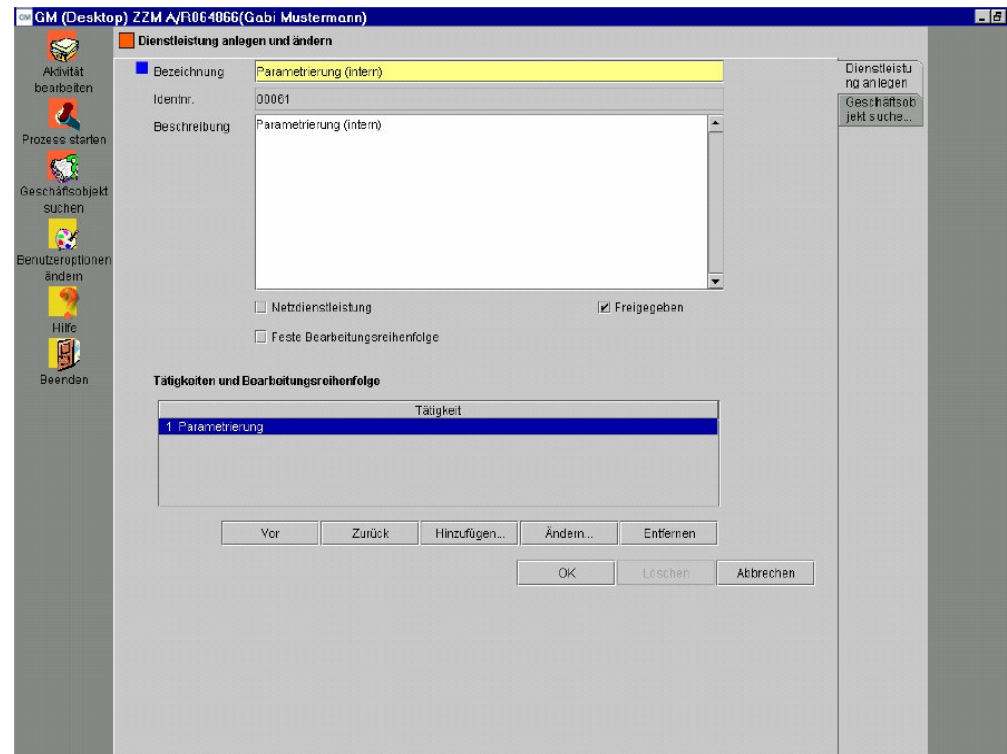


To ensure that order planning and -tracing can be conducted comprehensively, the administration of services in the equipment management tool was designed to be independent from certain order types.

Service orders are generated for completion of internal tasks such as processing or certifying meters as well as for assembling and disassembling and other tasks in the electricity network.

The basis for order positions are user determined services which consist of one or more user specific activities. Service orders are scheduled on a position level and cleared for processing.

For the constituent process-steps adequate completion confirmations are carried out. For process-steps of internal service orders the completion confirmations can be integrated into the workflow. Additionally, network process-steps can be confirmed offline via MDE. Completion confirmations, which create subsequent service orders, are enabled through fast-detection.





The “equipment manager” offers you:

- official cycle-accordant replacement
- operational cycle-accordant replacement
- operational cycle-accordant maintenance

The user specifies (depending on the cycle-character) the criteria for determining of the cycle-relevant articles. This is to be done referring to article types and networks. After determining the articles adequate service orders for replacement or maintenance of affected equipment are created. The status of the cycle is shown within a cycle statistic. The adjustment of more than one cycle at a time is possible.

GM (Desktop) ZZM/BD64866(Gabi Mustermona)

**Artikelturnus durchführen**

Verlagelotus: Turnus GK2 750 2001 NR NIKE Zuordnen...

Offset Jahr von: 1 Offset Jahr bis: 1 Übernehmen

Bezeichnung: Turnus 2002-M

Art: Artliche Wachselsung

**Bearbeitungszeitraum**

Datum von: 18.02.2002

Datum bis: 19.02.2002

Zustand: In Erfassung

Turnuskriterien **Netze** Statistiken

Typbezeichnung	Bejahr von	Eis	Eichjahr von	Eichjahr bis	Eigentums...
000700_065 / Elster 11R					
200300_016 / Rombach 11R					
302000_C114 UDrehstrom					

Hinzufügen... Ändern... Entfernen

Artikel einlesen Aufträge generieren Turnus beenden

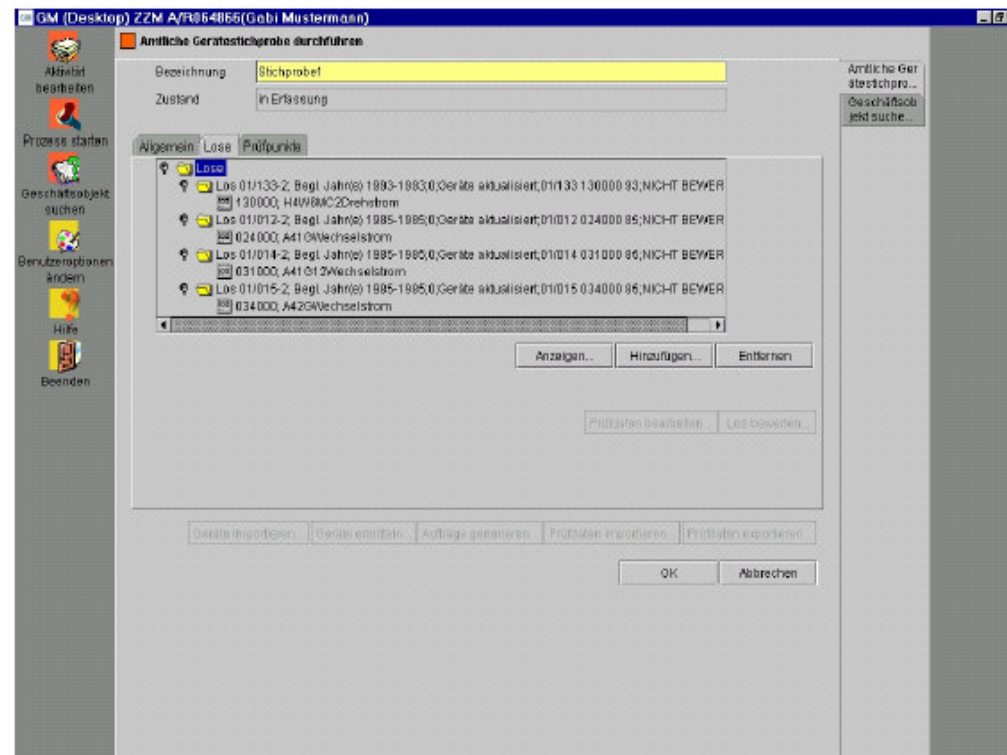
OK Abbrechen



The “equipment management” supports the conduction of official random samples. Depending on the equipment type different quality control plans for conduction of the random sample are considered.

Both simple and double random samples are possible. First the random samples are defined and correlated, the equipment to be tested is generated with the import function and the to be replaced random equipment is determined. Furthermore, orders for replacement and testing of the random equipment are generated, eventually for a second random sampling too. If the testing results are available they will be imported and the tested equipment evaluated. Having evaluated all samples the equipment data will be updated.

The testing results can be exported. The “equipment management” tool supports an EDU- comprehensive random test. Actually, more than 70 attendants of the electricity sector participate in the random test of the “equipment manager”.





The processes in the field of store housing are supported by a MDE-solution. Handheld equipment that is equipped with a barcode reader enables a precise and fast detection of equipment data. At the same time internal service orders (calibration, maintenance, compilation of assemblies) can be confirmed order position related with MDE. For the communication between the handheld equipment and the user system a radio network is used. Herewith it is assured that all MDE- actions are processed online in the system.



**Following interfaces towards other systems are provided:**

- a batch-interface for exporting relevant component data, which were removed from or added to the network after the date of the last data export. Currently used for the clearing systems EAV and SAP IS-U+ by RWE. Additionally planned for use in EAS and EBL at RWE
- a batch-interface for the import of relevant customer data from the clearing systems EAV and SAP IS-U
- an interface for the compensation of all equipment which are administrated in the clearing system and the equipment management tool (compensation is initiated once every 3 months, but is possible at any time)
- a XML-interface for transfer of order data (MDE-export) and confirmation information (MDE-import) with use of a MDE-system (offline)
- interfaces for importing and designing electronic delivery notes
- EBS-interface to the ZFA, the e\*Count and to the “equipment manager”
- with the EBD-interface the integration of additional partner systems is unproblematic



For evaluation which replenish the possibilities given by the “equipment manager”, the tool “business objects” is recommended. Basis for the evaluations are the so-called “universen” which provide data pools for analyzing the equipment disposition, the product movements, warehouse stocks, service orders and random samples. For analysis data from the equipment manager can be combined with data extracted from Excel-tables. The results of the analysis can be transformed into different formats (HTML etc.) and exported.

## Requirement

### Hardware

Hardware requirements for using the “equipment management” tool depend on the amount of installed components and the amount of users.

Basically, following Hardware components are necessary:

Server (communication / programs)

Server (database)

Client

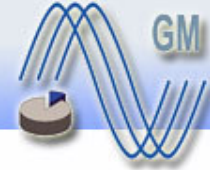
### Operating Systems

Windows NT and Unix

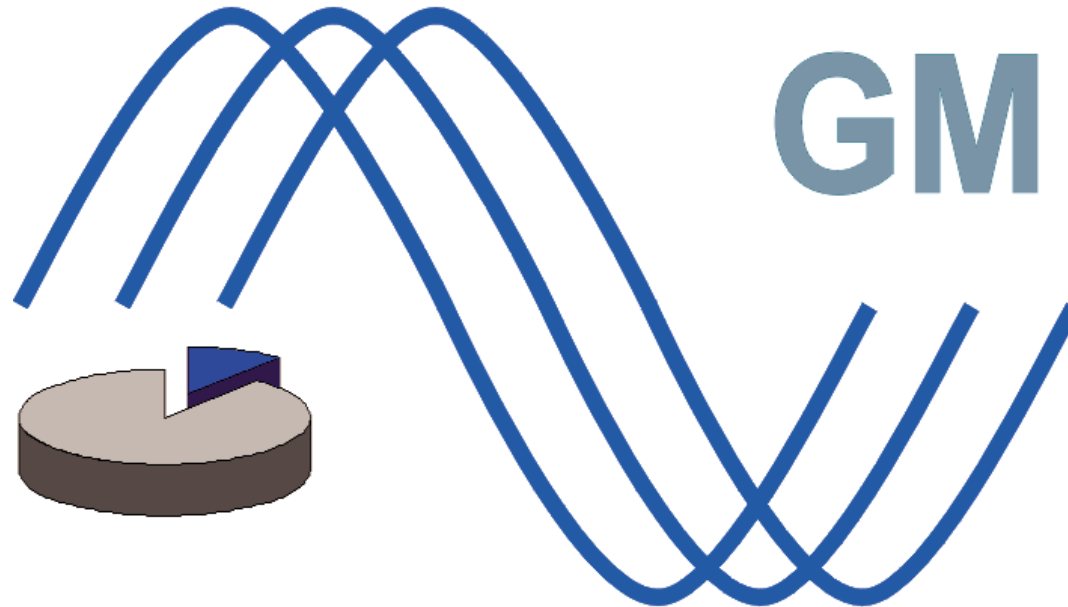
### Software

We recommend the use of Oracle as database.

For analysis the use of the software product “business object” is recommended.



We are offering our knowledge of “equipment management” in-house and external.



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