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Optimizes your logistics processes...



# METALAG

**Warehouse management and order picking**

**Logistics software and  
control system**



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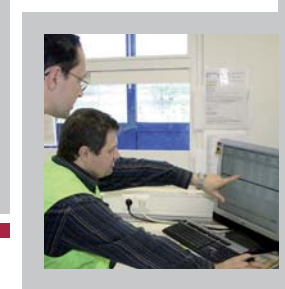
## Metasyst Management

### Mag. Karl Kaufmann MBA, Bc. Günther Laber

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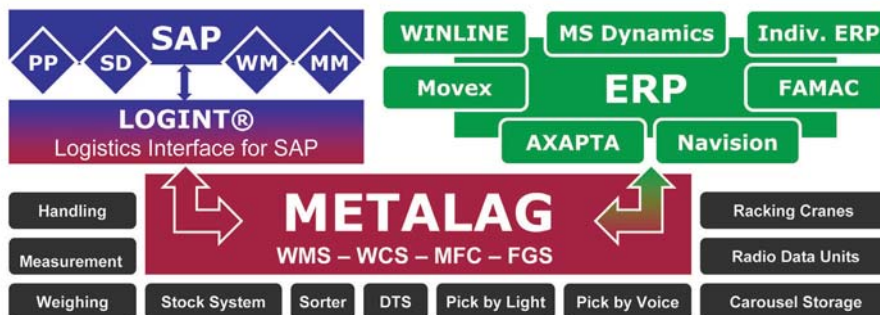
# METALAG



## Advantages of METALAG:

- Oriented toward customer process chain
- Multi user and client capability
- Multilingual
- Customer-defined menu, interfaces and report structure
- Graphical Windows user interface (JAVA)
- Supports customer-specific barcode formats
- Authorization concept
- Online-support
- Management batch and serial numbers
- Parameterizable
- Customizing capability
- Can be integrated into existing IT systems

## METALAG options of integration:



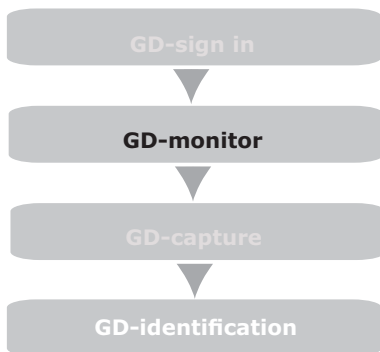
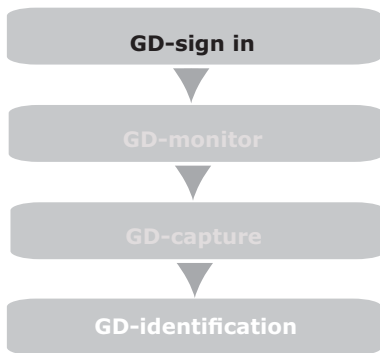
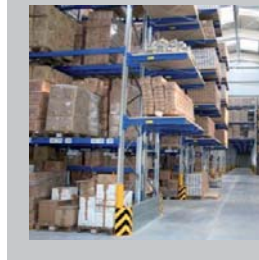


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## Goods Delivery

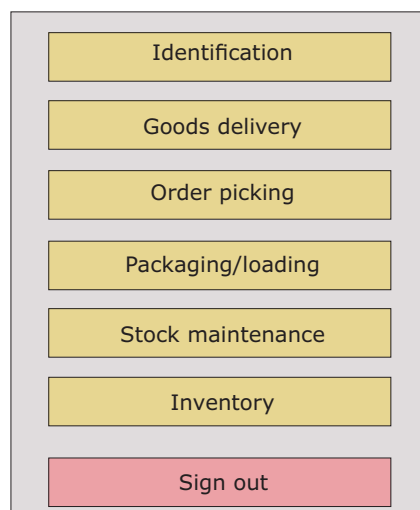


### GD-sign in

- Announced delivery (for pre-existing orders)
- Unannounced delivery (without order)
- Goods delivery with Avis
- Selecting goods delivery by entering search criteria
  - dispatch note no.
  - Order no.
  - Material no.
  - etc.
- Processing of partial deliveries, excess and deficit deliveries
- Planned/unplanned processing of returned goods

### GD-monitor

- Daily preview of expected goods deliveries
- Goods delivery deviations
- Evaluation of various criteria



# Goods Delivery



## GD-capture

- Actual quantities/deviations
- best-by-date
- Stillage
- Actual weight capture per stillage
  - e.g. pallet, container
- Quality control
- Supplier barcodes as alias
- Selecting goods delivery by entering search criteria
- Assembling pallets (homogenous/inhomogenous) with pallet ID (HU, SSCC) or storage units respectively
- Processing special treatments in goods delivery
- Customer-specific labeling

## Labeling

- Label printing per stillage
- Printing of goods delivery covering note per unit
- Printing of goods delivery list per delivery
- Printing of allocated storage area or place
- Goods delivery answering signal to host

## Supply

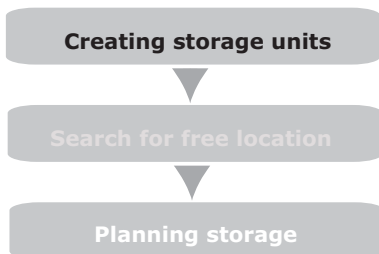
- Goods delivery zones management
- Automatic allocation as cross-docking-order on the basis of defined features:
  - Order type
  - Dispatch and packaging regulation
  - Backlog notice



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## Storage



### Creating storage units

- Allocation of transport orders (man/autom.)
  - Partial orders (split orders)
  - Collective orders/Consolidate (double pallets, sandwich pallets)
  - Transport cancellation
  - as per transport unit (receptacles, pallets)
- Automatic storage planning for load pick-ups
- Automatic/manual creation of mixed pallets

### Search for free location

- Selection of the optimal storage location based on user-dependent rules/strategies:
  - ABC-analysis
  - items/item groups
  - best-by date
  - quantity/volume per storage unit
  - shelf/stillage allocation
  - temperature and room conditions
  - classification of hazardous substances
  - entrance restrictions
  - storage stops
- lateral distribution (automatic warehouse)

# Storage



## Resource planning

### Resource planning

- Automatic allocation of transport orders
  - to user groups (manual warehouse)
  - to vehicles, sorted by priority
  - to specific resources

## Transport planning

### Transport planning

- Automatic forwarding of transport orders
  - to the conveyor technology (automatic warehouse)
  - to data radio devices (manual warehouse)
- Transport of fast moving parts
- Planning of transport route
- Multi stage transport orders
  - with fixed/flexible handover locations
- Transport prioritisation
- Transport cancelling
- Online status access

## Transport receipt

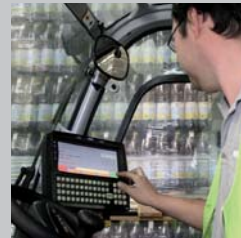
### Transport receipt

- Manual warehouse:
  - Storage location identification by barcode/check digit
  - Verification of storage by scanning storage location ID
  - Confirmation of storage at RF-Terminal

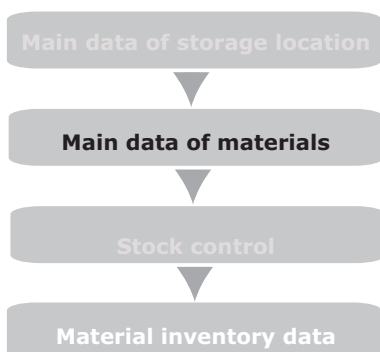
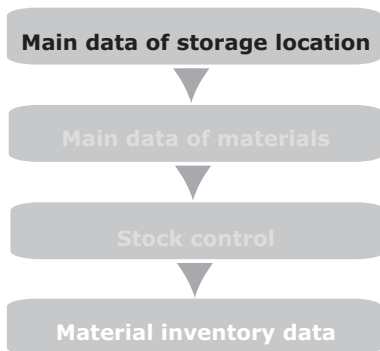


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## Warehouse Management



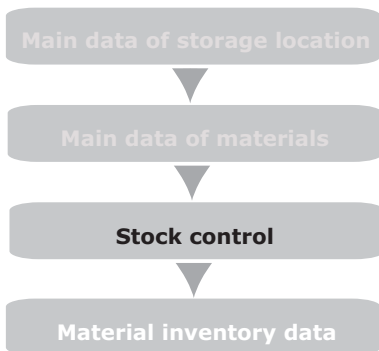
### Main data of storage location

- Manual warehouse:
  - Identification of storage location by barcode
  - Identification of storage location by check digit
- Flexible reserve location management
- Handling of order picking location
  - fixed per item
  - flexible per order volume/control system/handling unit
  - 1 to n order picking locations
- Support of various storage location labeling systems
- Warehouse configuration
  - Shelf classes
  - Structure (warehouse/store/zone/aisle/level/shelf/space)
  - Shelf types (rack/block/push-back pallet racking/etc...)

### Main data of materials

- Minimum quantities of stock for fixed locations
- Order picking parameter
- Customer-specific product description
  - Item group/product type
  - Weight/volume
  - Data of hazardous goods/materials
  - Packaging parameter
  - Unit for stock control
  - Storage regulations (temperature/room conditions)
  - Barcode types and formats
- Allocation of substitutes/follow-up items
- Special offer items

# Warehouse Management



## Stock control

- Stock control
  - per item (piece/weight/batch)
  - per packaging kit (barrel, sack, etc.)
  - per warehouse unit (pallet, container, etc.)
  - per store place
  - per number of reference
  - per best-by-date
- Block/unblock
  - per item (piece/weight)
  - per packaging kit (barrel, sack, etc.)
  - per warehouse unit (pallet, container, etc.)
  - per store place
  - per number of reference
- Re-lettering of items
- Item status codes
  - reserved
  - behind order
  - allocated
  - picked
  - loaded
  - cross dock
- Article stock codes
  - free
  - quality
  - blocked



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## Warehouse Management



### Monitoring

#### Monitoring

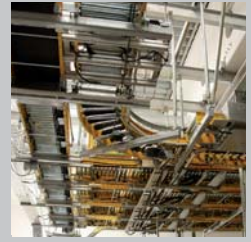
- Error reports
- Recording of transactions (tracing)
  - Transaction history (user/time stamp/type of transaction)
  - ad hoc transaction lists
  - Archiving concept
  - Trace-levels
- Complete booking control
- Information management
  - Reports on all main and movement data
  - via SQL
  - supports external access
  - Data export to Office applications

### Optimization

#### Optimization

- Function of consolidation
  - in storage
  - cyclical according to defined parameters
  - consolidation suggestions and release
- Automatic and manual replenishment function for fixed storage places
- Warehouse consolidation by automatic generating of re-positioning contracts between various warehouse locations and types
- ABC-analysis

# Warehouse Management



## Replenishment

### Replenishment

- Manual generating of replenishment directly to a picking area
- Automatic replenishment when
  - minimum stock level has been reached
  - an order has been released
 with the option of manual correction
- Change of batch or date according to material master
- Replenishment from
  - reserve space
  - goods delivery
  - transit area
- Replenishment of parts quantity

meta8dev@METSERV-DEV02 - Transport orders [SN/LS\_TRANSPORT]

SU # P001333% SL from [ ] SL to [ ]  From external WH only  To external WH only Zone from [ ] Zone to [ ]

Item # [ ] Str. from [ ] Str. to [ ]

Ref. No. [ ] Lvl. from [ ] Lvl. to [ ]

Priority [ ] Origin [ ]  today only  unhandled only House fr... [ ] House... [ ]

State [ ] Refresh  
Reset

1/7

Sel.	Ref.No.	SU	From	To	Amount	Weight [kg]	Volume [dm3]	State	Origin	Priority	Appl. U.	# Items
<input type="checkbox"/>	P0013335	10210090	2STU	2STU	16	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013337	10210110	2STU	2STU	16	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013333	10210120	2STU	2STU	16	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013332	10210140	2STU	2STU	4	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013334	10210150	2STU	2STU	16	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013336	10210170	2STU	2STU	16	144	1.070	FRE	NASC	5	16 - 237828	
<input type="checkbox"/>	P0013338	10720130	2STU	2STU	15	136	1.003	FRE	NASC	5	15 - 237828	

Detail information

Detail

Standard Replenishment Clear immediate Fill immediate Stock Overview History Perform

Priority + Priority - Excel Delete Item Detail Apply user [ ] Close

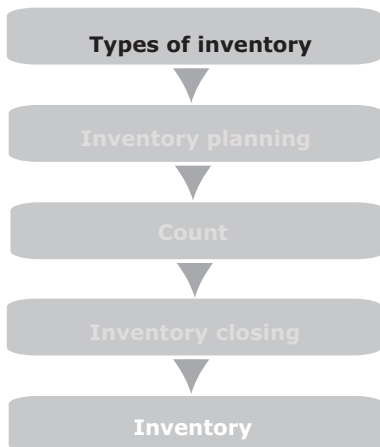


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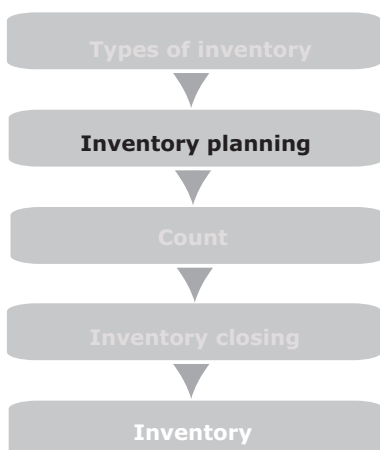


## Warehouse Management



### Types of inventory

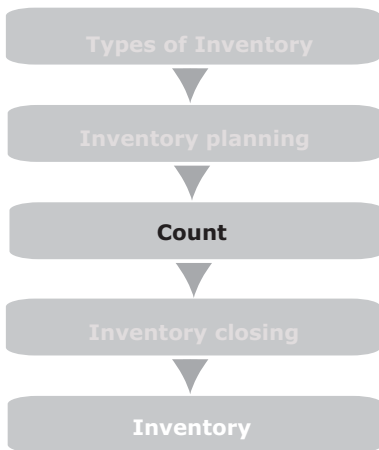
- Item inventory
- Storage location/space inventory
- Store inventory
- End-of-period inventory
- Zero crossing inventory
- Permanent inventory



### Inventory planning

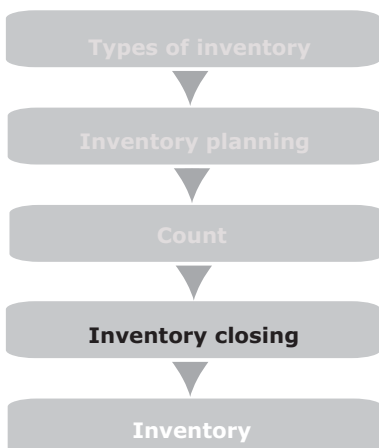
- Parameter-controlled
- With and without target quantity
- Sorted by space quantities
- Sorted by article numbers
- Max. amount of positions per count
- Generating count
  - items from/to
  - storage space from/to
  - spaces where no inventory has taken place since...
  - spaces or items every x days

# Warehouse Management



## Count

- Processing via radio or count lists
- Tolerance value at count
- List of differences
- Updating of inventory status
  - date/time
  - inventory closing
  - absolute corrections of stock
  - inventory report (discrepancies, progress)



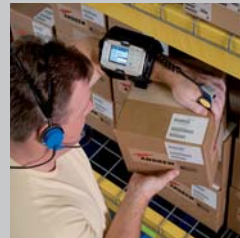
## Inventory closing

- Manual/automatic feedback to host
- Update of inventory status
  - date/time
  - inventory closing
  - absolute corrections of stock
  - inventory report (discrepancies, progress)



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## Order Picking

### Management of client orders

#### Management of client orders

- Manual/automatic reservation of quantities/items
- Manual/automatic order release and order blocking
- Small volume processing
  - automatic allocation (allocation key)
  - article exchange (substitutes, follow ups, specials)
- Concentration of client orders
- Picking location check and allocation
- Volume splitting/fixing quota

### Order picking strategies

#### Order picking strategy

- Order picking
- Multi-order picking
- Zone order picking
- Order picking of overlapping zones
- Order picking of whole pallets
- Collective order picking
- Multilevel order picking
- Client or branch oriented order picking
- Order picking by lists/labels
- Label order picking
- Online order picking
- Order picking by container
- Single pack picking
- Weight/quantity oriented order picking
- Pick & Pack (volume oriented)

# Order Picking



## Order picking deployment

### Order picking deployment

- Taking order picking duration into account
- Backward scheduling
- Manual/automatic creating of picking groups according to:
  - order/type of order
  - location/part of firm/type of warehouse
  - product range – quantity/weight
  - shaft/time slice
- Resource planning
- Manual/automatic printing of picking lists and labels
- Prioritisation
- Updating of order picking status

## Online Picking

## Picking

### Online Picking

- Automatic warehouse
  - automatic space check
  - automatic weight comparison
- Manual warehouse
  - manual space check by scanning
  - article check by barcode
  - best-by-date check
  - weight capture
- Customer defined tolerance value for weight comparison
- Updating of order picking status



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## Packaging

### Packaging optimization

#### Packaging optimization

- Picking waves for sorting packaging
- Check: target container per client
- Calculation of number of containers
- Dynamic allocation of spaces
  - packing place matrix controlled by parameters
- Merging of orders
  - by dynamic allocation of global destinations to packing spaces

### Packaging

#### Packing

- Allocation of containers per order
- Packing of items into dispatch boxes/containers
- Pallet packaging
- Linking of heavy duty sorting systems and storage conveyer
- Display of specific packaging instructions by client and order
- Weighing/weight control

### Labeling

#### Labeling

- Printing of packing lists
  - per order
  - per trip
  - per loading unit
- Printing of dispatch list/dispatch label

# Supply



## Trip planning

### Trip planning

- Compiling trip list/trip plan
  - according to client
  - according to order/priority/date
  - according to delivery destination/area
  - according to quantity/volume
  - according to part/whole order
  - according to dispatch lines
  - according to loading platform allocation
- Calculation of shipping costs

Touren [SN/LS\_TOUR]

Date from: 31.08.2007 dd.mm.yyyy Date to: 31.08.2011 dd.mm.yyyy  History 1/6743 Refresh

Warehouse:

Date	Warehouse	I.	Tour No.	Tour Name	# Orders	New	Open	In work	Ready	Storno	Other	PL
14.04.2009	Lager 1	OT	54	Tour 9330	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	0	Tour 9420	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 1026	2	2	0	0	0	0	0	2
14.04.2009	Lager 5	KT	0	Tour 10450	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 4030	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 45027	1	0	0	0	1	0	0	0
14.04.2009	Lager 5	KT	0	Tour 27022	2	0	1	0	1	0	0	1
14.04.2009	Lager 5	KT	0	Tour SW1X 8PZ	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 40	2	0	2	0	0	0	0	2
14.04.2009	Lager 5	KT	0	Tour 40000	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 3252	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	0	Tour 74006	1	0	1	0	0	0	0	1
14.04.2009	Lager 5	KT	0	Tour 4481	1	1	0	0	0	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3331	2	0	0	0	2	0	0	2
14.04.2009	Lager 5	KT	1	Tour 3322	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3680	2	0	0	0	2	0	0	2
14.04.2009	Lager 5	KT	1	Tour 3373	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3363	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3311	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3362	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3380	2	0	0	0	2	0	0	2
14.04.2009	Lager 5	KT	1	Tour 3323	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3300	9	0	0	0	9	0	0	9
14.04.2009	Lager 5	KT	1	Tour 3253	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	1	Tour 3365	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 2051	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3550	2	0	0	0	2	0	0	2
14.04.2009	Lager 5	KT	10	Tour 3753	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3384	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3435	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3720	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 2054	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3454	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3386	1	0	0	0	1	0	0	1
14.04.2009	Lager 5	KT	10	Tour 3124	1	0	0	0	1	0	0	1

Orders Printer KEOP Print Picklist Print Loading list Print Tour list Close Picking Close

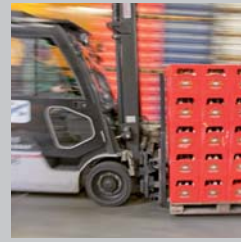
Delete Dummy stock Item List



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## Loading



### Loading deployment

#### **Loading deployment**

- Allocation of loading platforms

### Loading processing

#### **Loading processing**

- Control scanning of dispatch units
- Updating of loading status
- Controlled loading according to:
  - client
  - order
  - Shipping agent

### Loading papers

#### **Loading papers**

- Loading list
- Packing lists
- Loading register
- Client-specific papers
- Automatically generated, event-controlled paper printout

## Clients who trust us



**Our logistics solutions are being used in various sectors across Europe. Many of our clients appreciate our experience and flexibility.**

We are customer oriented and have realized 200 projects at home and abroad. Here you can find an extract from our references:

## Contact visit of reference

**You would like to view one of our references? Just contact us!**

keyword "visit of reference" to:  
[info@metasyst.at](mailto:info@metasyst.at)

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**SCHRACK**  
TECHNIK



**BRAUNION**  
ÖSTERREICH



**WOLFPLASTICS**

**RADLBERGER**



zumtobel group

**EN-LOG**  
Logistik-Dienstleistungen GmbH

**WINDHAGER**





**I N F O R M A T I K**

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*Günther Laber*

*Mag. Karl Kaufmann*

**About Metasyst Informatik**

Proven and internationally experienced experts merged to form METASYST Informatik in 1990. Longstanding experience in various areas and a multi-faceted IT-background form the basis. Flexibility, quality consciousness and sensibility to the clients' individual problems make the team at METASYST Informatik a competent partner.

As it is a family-run business of the families Laber and Kaufmann, continuity and the safeguarding of the future are at the forefront of firm policies, providing long-term investment security for Metasyst partners.

**Metasyst  
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**Automation & Integration**

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