

# EDIFICE 91<sup>st</sup> Plenary

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## SNPM Serial Number Process Management

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by Ernst Klaus of Phoron

Vienna, 24.11.2004



# Agenda

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- **Why to Manage Serial Numbers ?**
- **SNPM<sup>®</sup> – Solution for Serial Number Process Management**
- **SNPM<sup>®</sup> Logistics / SNPM<sup>®</sup> Asset / SNPM<sup>®</sup> Core**
- **Leveraging B2B – Initiatives by mobilkom austria**
- **Business Benefits**
- **Fields of Application**

# SN-Figures mobilkom austria group

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- 253 Mio. Overall Number of Managed SN (since 1999)
- 200.000 Average Moved SN/Day in Logistics Sector
- 100.000 Average Delivered SN/Day in Logistics Sector
- 8.000 Sites in Asset Management
- 700.000 Installed Equipments
- 1.000 Average Moved EQ/Day in Financial Asset Sector
- 250 Users

# Why did mobilkom develop SNPM® ?

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## Scope

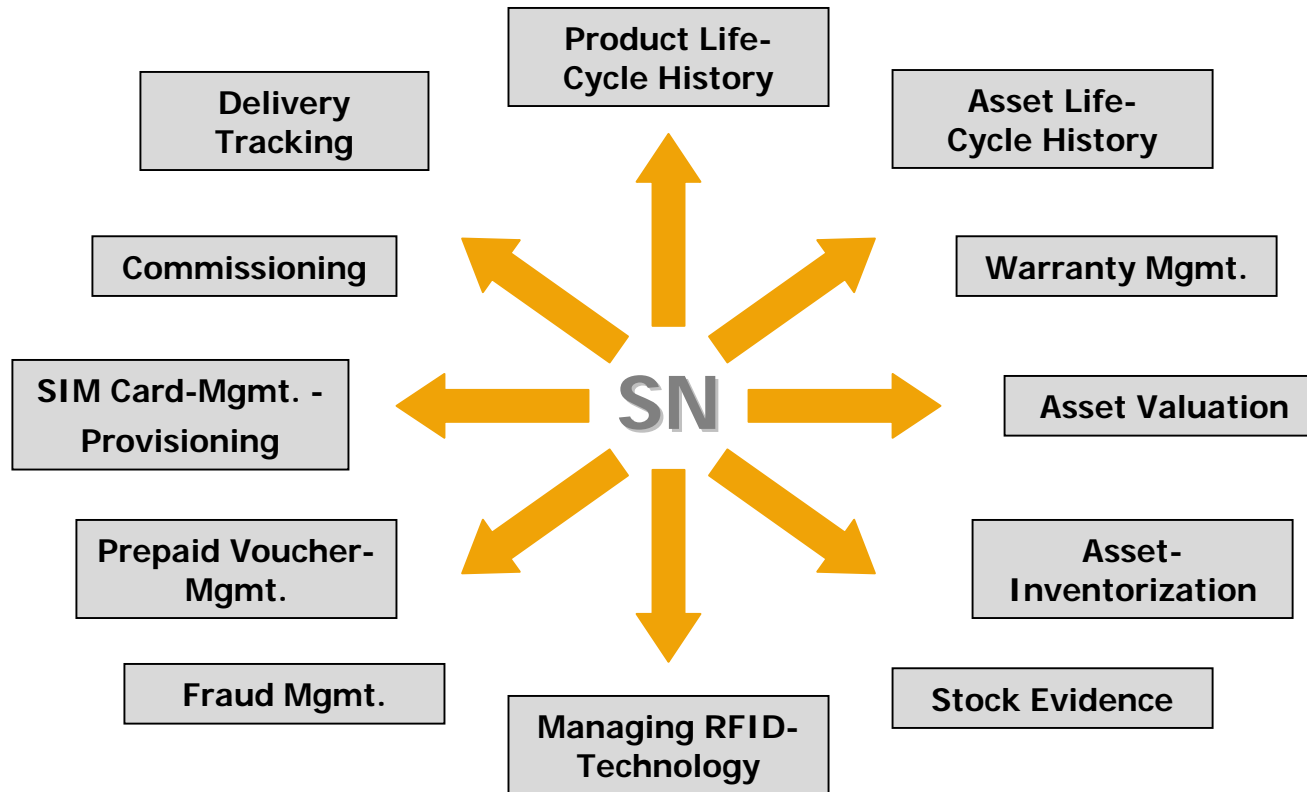
- **Inventory Management of Trading Goods and Equipments on SN-Level**
- **Integrative Administration of Assets (Radio Access Networks, IT, Facilities),**
- **Avoidance of any Redundancies along the Product and Asset Life Cycle**

## Specific Features

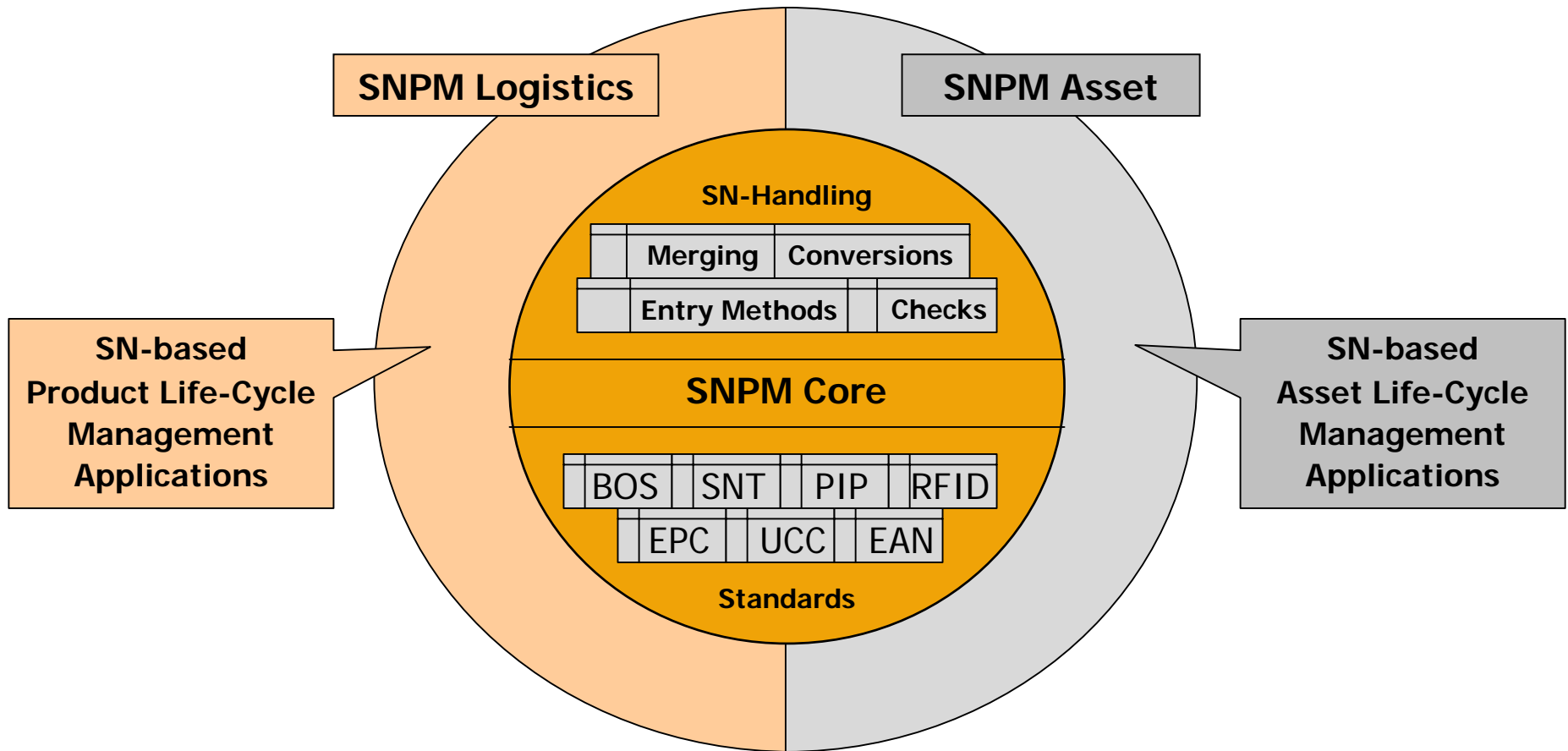
- **Use of Multiple Bill of Serial Numbers (BOS)**
- **Standardization of Communication for Extended SCM (e.g. PIPs)**
- **State-of-the-art Entry Methods of Serial Numbers (incl. RFID)**
- **Quality Assurance by flexibly configurable SN-Checks at all SN-Entry Points**

# Why Serial Number Process Management ?

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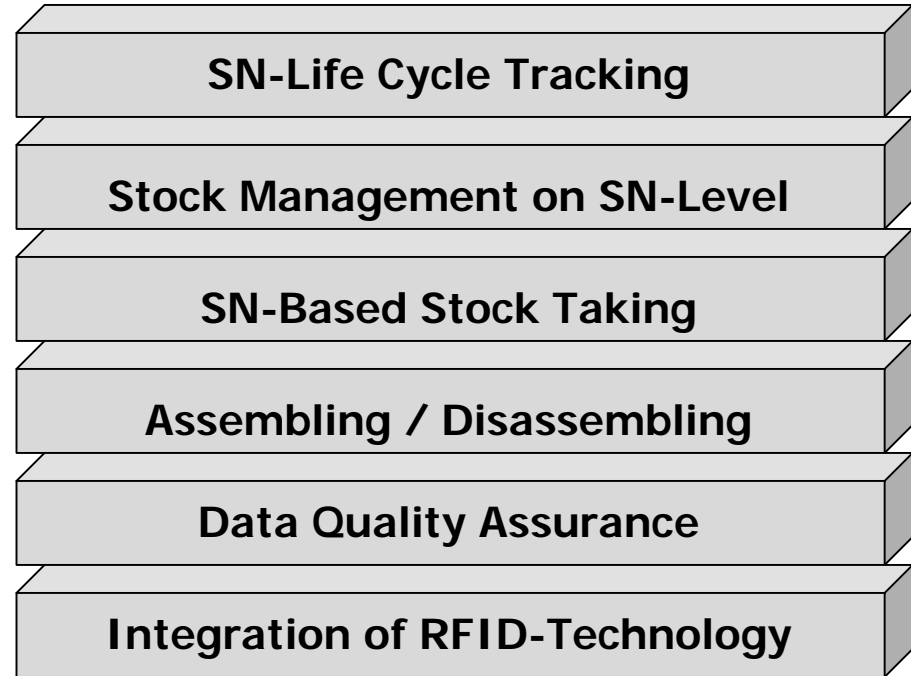
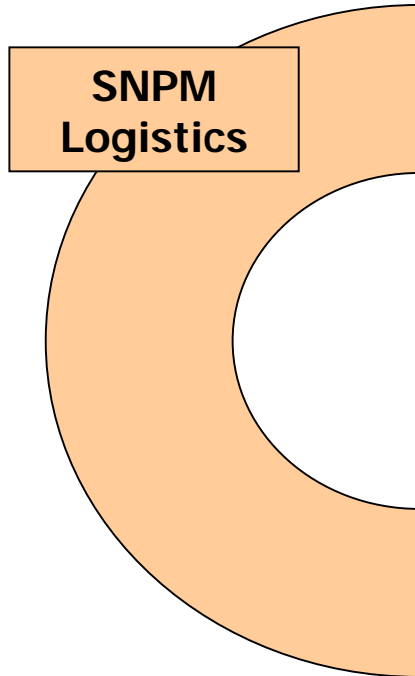
# SNPM<sup>®</sup> Module Concept



# SNPM<sup>®</sup> Logistics

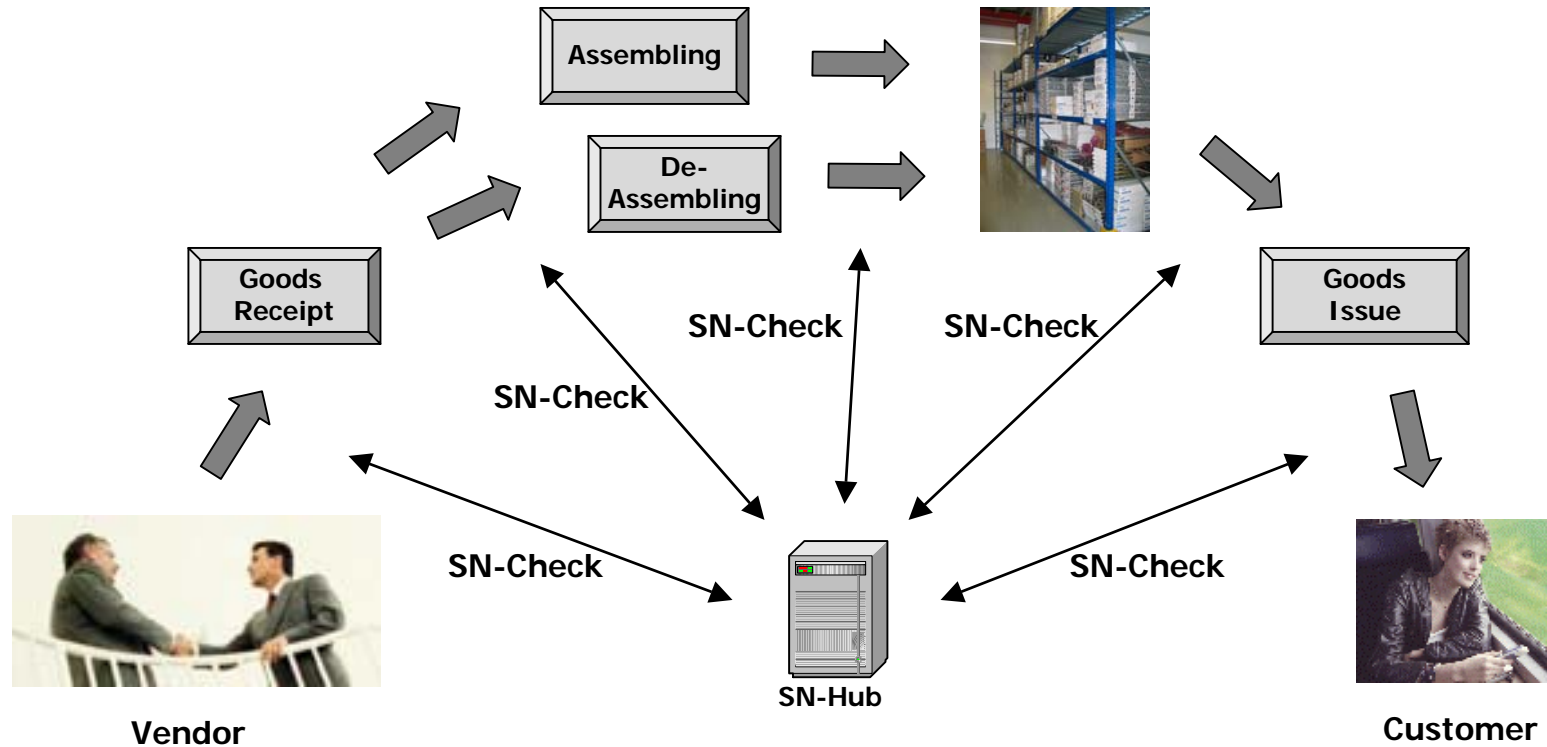
## Features & Functionalities

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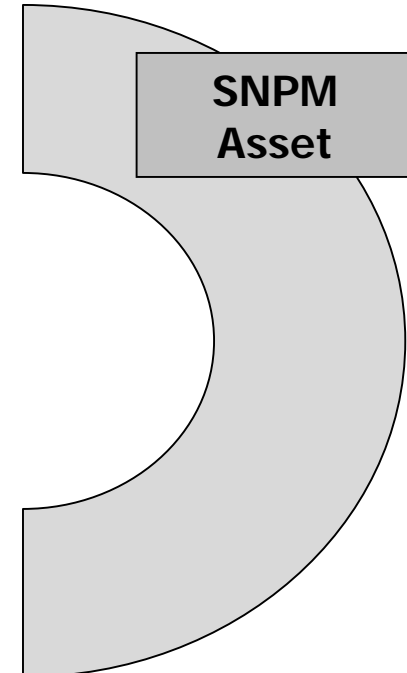
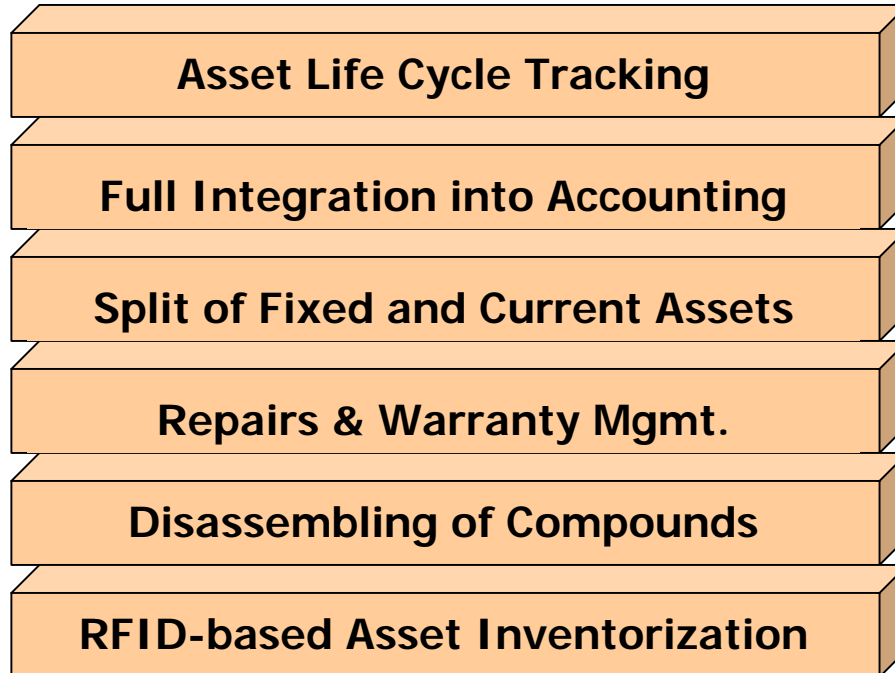
# SNPM<sup>®</sup> Logistics Logistics Life-Cycle

[Video:  
Data entry of serial numbers  
using RFID technology](#)

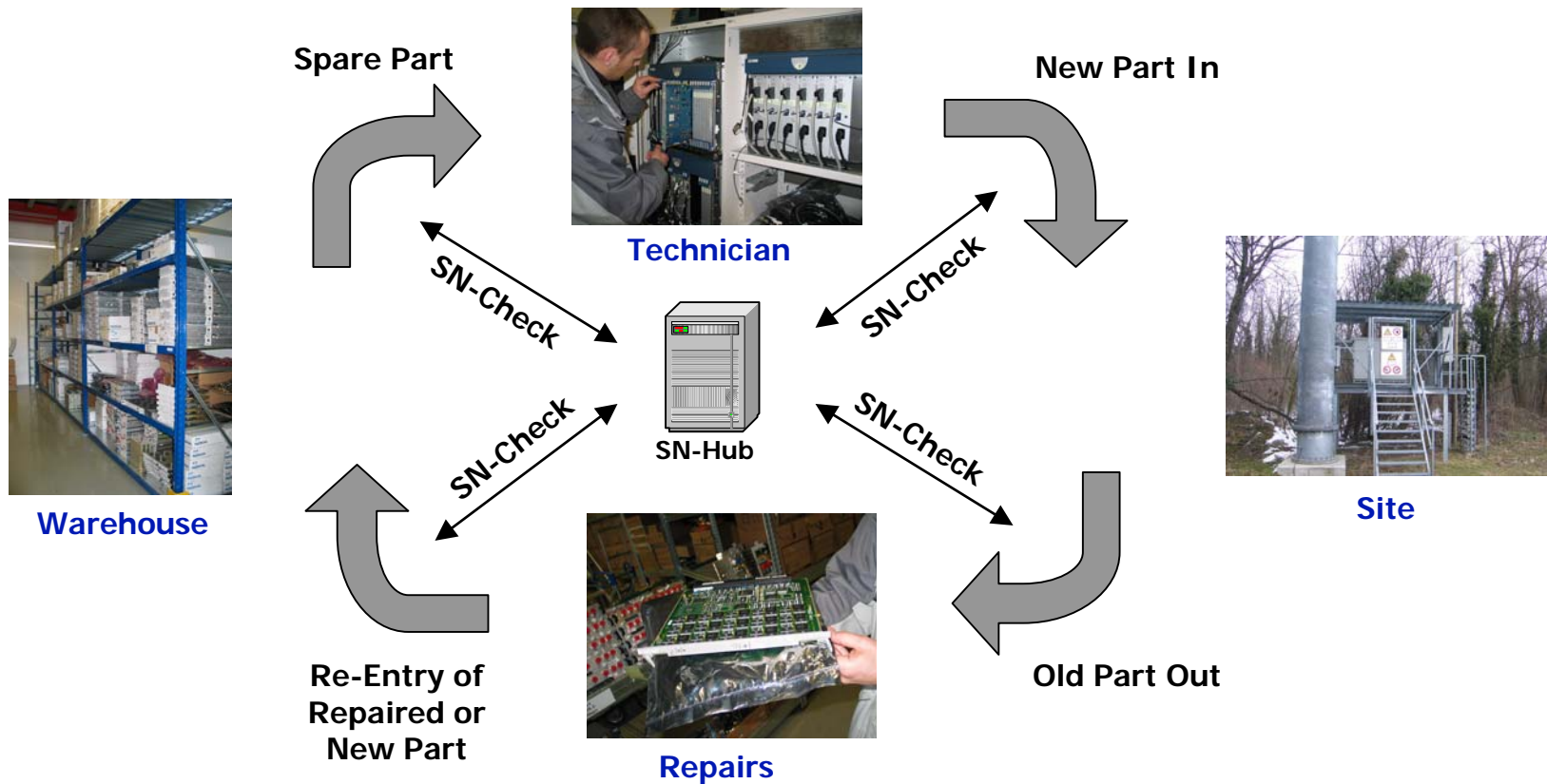


# SNPM<sup>®</sup> Asset Features & Functionalities

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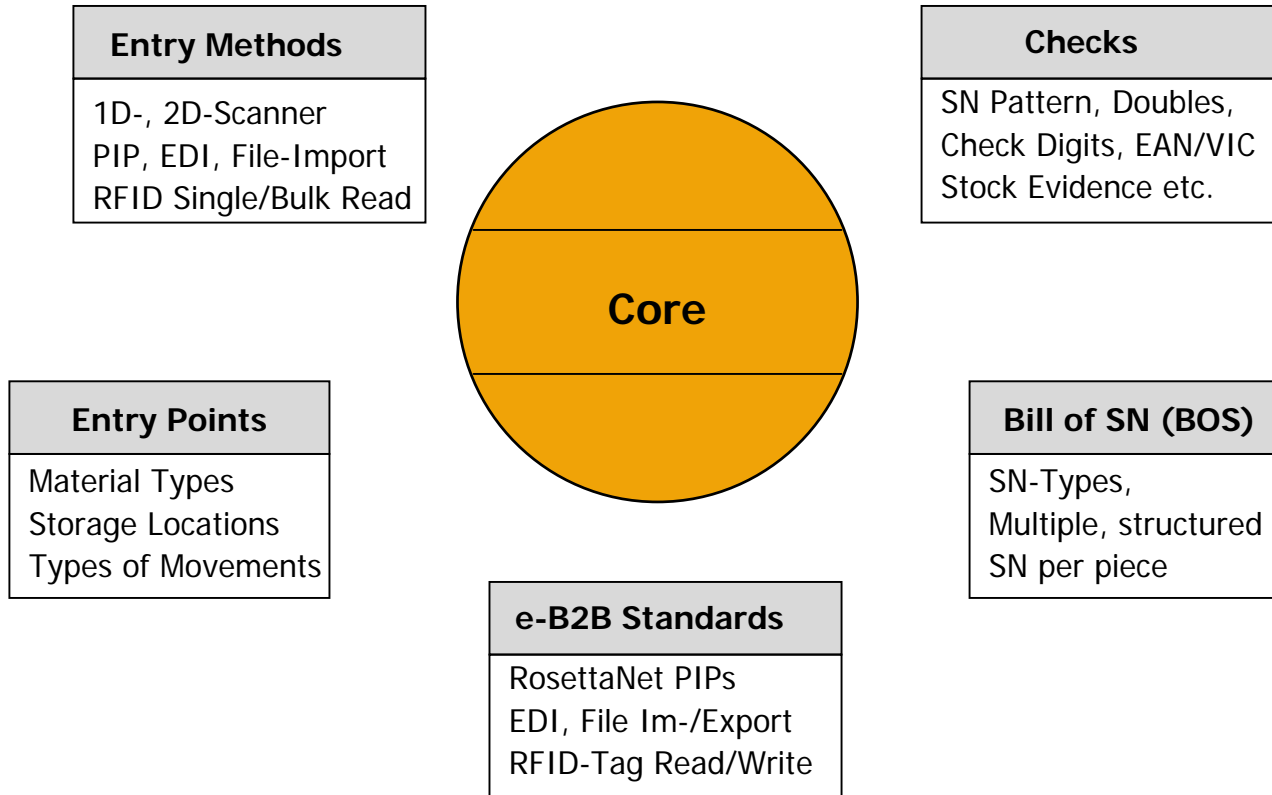
# SNPM<sup>®</sup> Asset Asset Life-Cycle



# SNPM® Core

## Aspects of SN-Handling – Standards

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# Leveraging B2B Initiatives by mobilkom austria

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- **Integration of RFID along the entire Supply Chain**  
-> Exchange of Relevant Business Data on RFID Tags

**RFID Integration**

- **Electronic Exchange of Product Serial Numbers**  
-> Use of SN-PIPs: BOS-Request, BOS-Shipment Notification

**BOS-PIPs**

- **Business Data Exchange via a Global Serial Number Hub**

**Global SN-Hub**

# Leveraging B2B RFID Process Management

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## READ

- Additional and Fast Method to enter SN into ERP-systems

## WRITE

- Assigning Process resp. Supply Chain Relevant Data to the Physical Product

## MERGE

- Assigning Tag-IDs to Process Relevant Data in ERP-Databases

## TRIGGER

- Initiating Processes by the Physical Product itself

## P2M

- A Technology that realizes P2M (Product-to-Machine) Communication

# Leveraging B2B Bill of Serial Number (BOS) PIPs

## BOS Request

This document has been prepared by Mobilkom Austria.

1	1	<a href="#">BillOfSerialnumberRequest</a>
2	1	-- <a href="#">BillOfSerialnumber</a>
3	0..n	-- <a href="#">Attachment</a>
4	0..1	-- <a href="#">description.FreeFormText</a>
5	0..1	-- <a href="#">GlobalAttachmentDescriptionCode</a>
6	1	-- <a href="#">GlobalMimeTypeQualifierCode</a>
7	1	-- <a href="#">UniversalResourceIdentifier</a>
8	1..n	-- <a href="#">BillOfSerialnumberItem</a>
9	0..1	-- <a href="#">description.FreeFormText</a>
10	0..1	-- <a href="#">effectiveDatePeriod.DatePeriod</a>
11	1	-- <a href="#">beginDate.DateStamp</a>
12	0..1	-- <a href="#">endDate.DateStamp</a>
13	1	-- <a href="#">BillOfSerialnumberLevel</a>
14	1	-- <a href="#">SubBillOfSerialnumber</a>
15	1	-- <a href="#">GlobalSerialnumberTypeCode</a>
16	0..1	-- <a href="#">SerialSpecification</a>
17	1	-- <a href="#">isSerializationRequired.AffirmationIndicator</a>
18	0..n	-- <a href="#">SerialNumberIdentification</a>
19	1	-- <a href="#">ProprietarySerialIdentifier</a>
20	1	-- <a href="#">SequenceNumber</a>
21	1	-- <a href="#">BillOfSerialnumberItemReferenz</a>
22	1	-- <a href="#">SerialnumberTypeRequired</a>

## BOS Shipment Notification

This document has been prepared by Mobilkom Austria

1	1	<a href="#">SerialnumberShipmentNotification</a>
2	1	-- <a href="#">PrivatePartner</a>
92	1	-- <a href="#">Shipment</a>
93	0..1	-- <a href="#">freightPaymentAccount.AccountNumber</a>
134	1..n	-- <a href="#">ShippingItem</a>
135	1..n	-- <a href="#">shipmentIdentifier.ProprietaryReferenceId</a>
136	1..n	-- <a href="#">LineNumber</a>
137	1..n	-- <a href="#">OrderQuantity</a>
138	1	-- <a href="#">OrderUnitofMeasure</a>
139	1..n	-- <a href="#">BaseQuantity</a>
140	1	-- <a href="#">BaseUnitofMeasure</a>
141	1	-- <a href="#">ProductIdentification</a>
142	0..1	-- <a href="#">GlobalProductIdentifier</a>
143	0..n	-- <a href="#">PartnerProductIdentifier</a>
144	1	-- <a href="#">GlobalPartnerClassificationCode</a>
145	1	-- <a href="#">ProprietaryProductIdentifier</a>
146	0..1	-- <a href="#">revisionIdentifier.FreeFormText</a>
147	1..n	-- <a href="#">BillOfSerialnumber</a>
148	1	-- <a href="#">PieceNumberBaseUnit</a>
149	1..n	-- <a href="#">BillOfSerialnumberItem</a>
150	0..1	-- <a href="#">BillOfSerialnumberLevel</a>
151	0..1	-- <a href="#">SubBillOfSerialnumber</a>

# Leveraging B2B Vision of a Global Serial Number Hub

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## GTIN

RosettaNet specifies the Global Trade Item Number (GTIN) for Global Product Identifier in its PIPs.

## Product & Partner Codes



**ROSETTANET**  
eBusiness Standards for the Global Supply Chain

RosettaNet Partner Interface  
**Processes® (PIPs®)**  
define business processes  
between trading partners.

## D-U-N-S

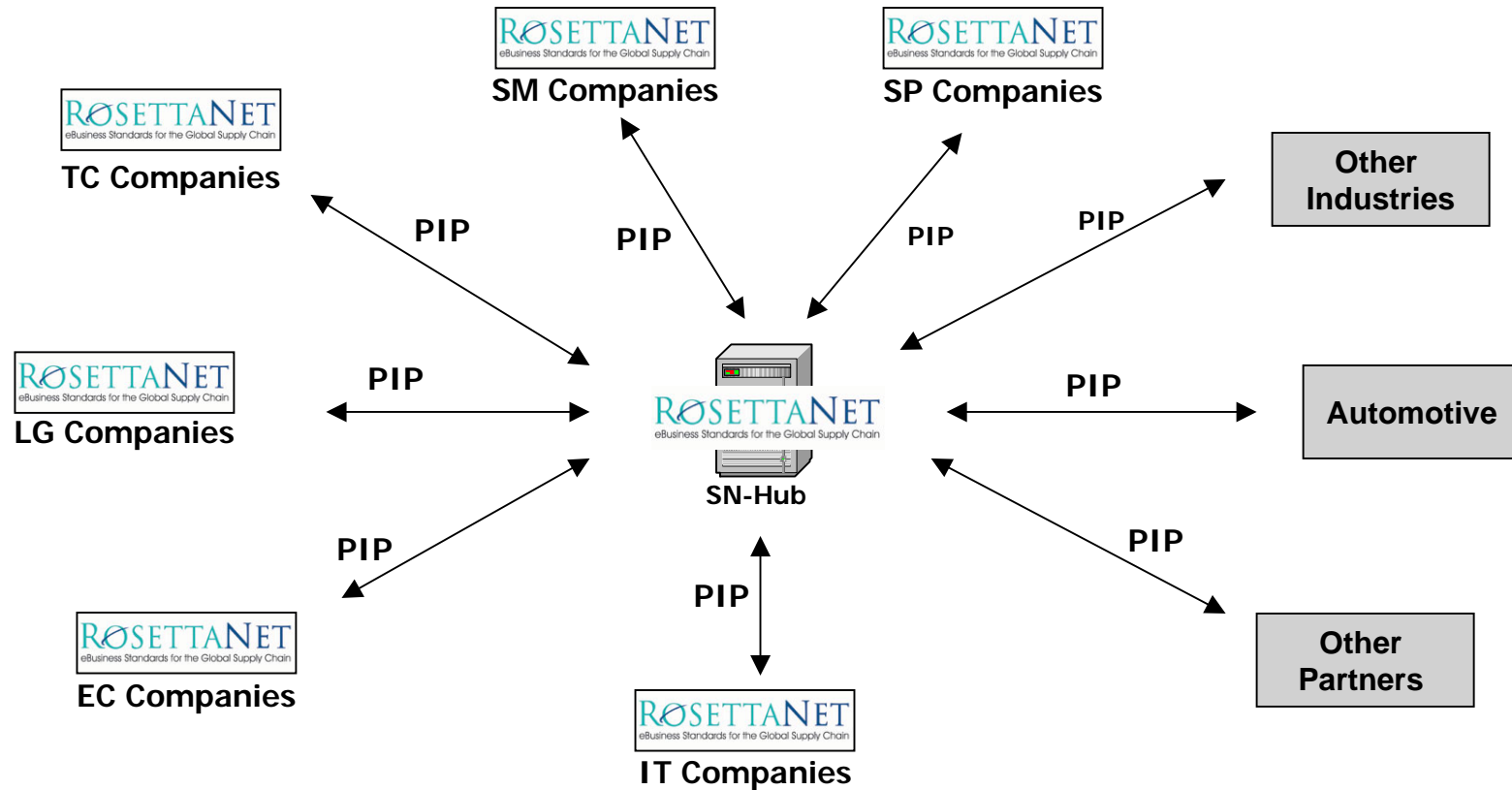
RosettaNet specifies the Data Universal Numbering System (D-U-N-S®) for Global Company Identifier in its PIPs



**SN-Hub**

# Leveraging B2B

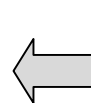
## Vision of a Global Serial Number Hub



# SNPM<sup>®</sup> Customer Benefits

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Reduction in Lead Time
Optimized Warranty Mgmt.
Enhanced Process Control
Enhanced Failure Prevention
Optimized Inventorization
Manpower Reduction
Repairs and Service Costs
Operative Asset Management



**Cost Cutting**

**Cost Avoidance**



Minimized Prod. Liability Risk
Fraud Prevention
Static Manpower Costs
Reclamation Management
Enhanced Quality Mgmt.
Enhanced Reporting
Reduced Training Effort
Redundant Data Management

# SNPM<sup>®</sup> Fields of Application

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## ■ SN Process Management

- SN-based Life-Cycle Management of Products and Devices on Item Level
- Logistics of Trading Goods
- Integrated Management of Assets

## ■ Industrial Sectors

- Retail
- Telco
- Network Suppliers
- Plant Engineering and Construction
- Automotive
- OEM



# Summary

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- **Need for Managing Serial Numbers**
- **SNPM<sup>®</sup> – Solution for Serial Number Process Management**
- **Leveraging B2B – Initiatives by mobilkom austria**
- **Business Benefits - Fields of Application**