



## **CO2 Footprint Management**

### **Case Study: ATC Board Production**

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## 1 Introduction

This case study is based on the ATC System, **board production only**, used in the ERP Systems lecture. It is enhanced to cover also CO2 Accounting following IFRS S2.

The system used is the SAP Sustainability Footprint Manager. The case study will comprise of three implementation steps:

- Master data and basic structures
- Operations data
- Reporting and CO2 Accounting proper

## 2 Master Data Upload

Unless mentioned otherwise, the data is uploaded from files distributed to students.

### 2.1 Organisational Data

Valuation area	0001	general
<b>Company</b>	0001	general
<b>Controlling area</b>	0001	general
<b>Ledger</b>	01	general
<b>Plants</b>	GR01 GR02 ...	specific
<b>Cost centres</b>	GRXX-SMD GRXX-EPROM GRXX-QC	Specific
<b>Resources</b>	GRXX-SMD GRXX-EPROM GRXX-QC	Specific

## 2.2 Footprint Inventory Scope for Organisation

The inventory covers Scopes 1 and 2, Scope 3.3 and 3.5. All other scopes are disregarded for our case study.

The scope is defined for Company 0001, add your plant GRXX. All settings are inherited to the plant assigned to the footprint inventory scope.

Then check out dimensions and units of measure (UoM) as well as the activity.

Dimensions	See list	general
Units of measure	See list	general
Activity	manu-h	general

## 2.3 Products and Purchased Product Footprints

Product groups	01	general
Product types	0000 raw materials 0001 semi-finished product 0002 finished product	general
Products	See list in file	specific
Suppliers	GRXX-V1 Techno Plc GRXX-V2 Electronic Supplies Inc	specific

Then add the purchased product footprint, all supplier-specific. Our factory is located in Vienna. Techno is located in the Netherlands, road transport by truck. Electronic Supplies is located in Taiwan, directly at the port of Kaohsiung; the parts are transported by container ship to Trieste and then by road transport to our factory in Vienna.

Vendor	Part	EUR/pc*
GRXX-V1	Circuit board incl. pins	100,00
GRXX-V1	EPROM	48,00
GRXX-V1	Diode type A	1,50
GRXX-V1	Diode type B	0,70
GRXX-V2	DSP	620,00
GRXX-V1	Resistance type A	1,00
GRXX-V1	Resistance type B	1,20
GRXX-V2	32 GB storage module	110,00

## 2.4 Planned Energy Consumption Rates

However, first we have to define which energy carriers are used for these consumption rates and how they are metered.

In “Model Energy Flows”, electricity and natural gas are already defined as an energy carrier. Also, the energy source Verbund is pre-defined. Check the emission scope for electricity.

## 2.5 Manage Locations

Search for your plant GRXX and create the following locations:

### Facilities

ID	Description	Location type	Plant	Company
<b>PLXX-Office</b>	Office building	Facility	GRXX	0001
<b>PLXX-Prod</b>	Production facility	Facility	GRXX	0001

### Resources

The resources entered as master data (work centers) should already be listed. No additional resources are needed.

### Meters

Create the following meters plant-specific in PLXX. No business partner details need to be entered.

ID	Description	Location type	Energy carrier
<b>PLXX-Ele-1</b>	Electricity meter production facility	Meter	Electricity
<b>PLXX-Ele-2</b>	Electricity meter office building	Meter	Electricity
<b>PLXX-Ele-3.1</b>	Electricity meter SMD	Meter	Electricity
<b>PLXX-Ele-3.2</b>	Electricity meter EPROM	Meter	Electricity
<b>PLXX-Ele-3.3</b>	Electricity meter QC	Meter	Electricity

## 2.6 Modelling the Energy Flow

Model the energy flow using the following data:

- Energy sources
- Meters
- Facilities
- Resources

Model the respective meters energy source and facilities/resources together with your lecturer.

### 3 Business Transactions

Unless mentioned otherwise, the data is uploaded from files distributed to students.

#### 3.1 Material Flow and Production/Service Confirmations (Import Business Transactions)

3.1.1 Upload the production documents (ie, production or service orders) in the Master Data function.

3.1.2 Then consider file TransactionalDataWithAmountWithDescriptions.xlsx which contains the following elements:

Type	Measure
Opening stock level	Quantities
Goods receipts from suppliers	Quantities
Goods returned to suppliers	n/a
Goods issues for production	Quantities with production document references
Goods receipts from production	Quantities with production document references
Internal Service confirmation	Times with production document references
Customer returns	n/a
Goods issues for customer	n/a
Goods issue without reference	n/a
Goods receipt without reference	n/a
Goods transfers	n/a
Goods issue for cost center	n/a
Goods return from cost center	n/a
Goods issue for project	n/a
Goods return from project	n/a

Create three production orders and create credible entries for all items not designated as n/a.

### 3.2 Define Waste Types and Waste Disposal Footprints

Find the waste types in the respective file and the corresponding disposal method. The methods available can be seen in the master data app.

<b>ID</b>	<b>Description</b>	<b>UoM</b>	<b>Disposal</b>
PLXX-01	Metal scrap	KG	LANDFILLING
PLXX-02	Cardboard packaging material	KG	RECYCLING

The waste classification code is NON-HAZARDOUS in all three cases. These waste types are now referenced in the Waste Disposal Footprint app. with the data below. Note that per waste type we have only one disposal type. Insert credible entries.

### 3.3 Calculate Footprints

Go to the app and create a footprint calculation.