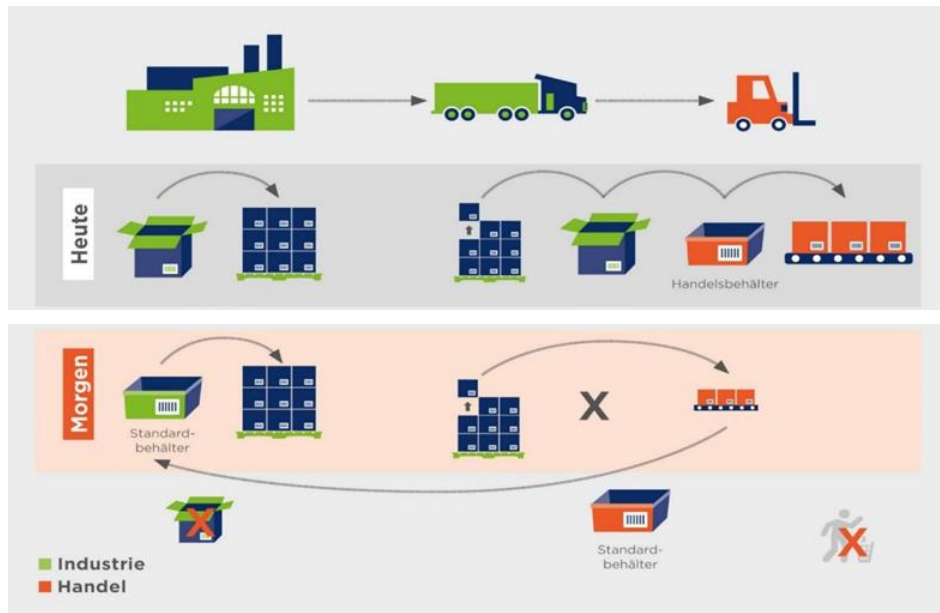


Transparent, sustainable and cost-effective: the GS1 SMART-Box in manufacturers to retail networks

Matthias Haubenreißer, Competence Center Supply Chain Management / Competence Center MTV
GS1 Germany GmbH



The process is, what matters



20% lower logistics costs*

60% less cardboard used**

emits up to 35% less CO₂ than a disposable carton in the average scenario**

*Business case across all participating companies

**institute for energy and environmental research (IFEU)

Potential savings from a standard reusable box (1)



- change from stacked consignments with American boxes to EUL 1/2 consignments with the GS1 SMART-Box
- Reducing pallet space (transport)
- Reducing cost for pallet cycle (estimated av. 3,81€)*
- Reducing administration expenses



*based on a analysis of Fraunhofer institute for materials research and logistics IML

Potential savings from a standard reusable box (2)



- change from opening the cardboard box, repacking the goods and dispose of packaging material to an optimized flow
- optimized picking process both at the manufacturer (mixed pallets) and the retailer
- saving in material costs

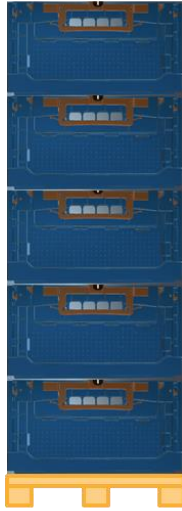


Optimal transport and storage utilization



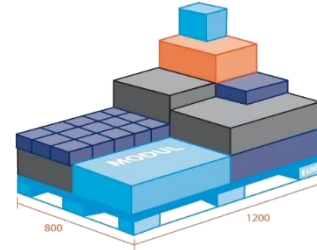
Already implemented

1,20 m



The GS1 SMART-Box Type E (211 mm) optimally meets the criteria of EUL 1 and EUL 2

Interaction of product packaging and RTI



The criteria for modularity can be applied to primary packaging as well in the long term

Grundmaß	Multimodule	Untermaße
600 x 400 mm	1.200 x 800 mm 800 x 600 mm	400 x 300 mm 300 x 200 mm 400 x 200 mm 400 x 150 mm 300 x 100 mm

The GS1 SMART-Box concept



→ The label is supplemented by RFID right from the start

- 6 different sizes (based on 600x400 and 300x400 mm)
- Process requirements
 - fit to the conveyor system
 - Shutter for easier picking process
 - Nap field for easier removal of labels
- GS1 identification standards
 - Serialized GRAI for asset type and version
 - Left-/right-identification (shutter)
- Compliance with VdS* fire protection requirements (→ FM Global* requirements will be met shortly)

* VdS / FM Global are independent institutions which have been ensuring safety and trust in the fields of fire protection and security

Identifyer - GS1 GRAI



DB 8003 = GRAI
40 55923 = GS1 Germany
99988 = Asset type
3 = Check digit
194235 = serial number
DB 90 = individual use
01 = left / 02 = right

- Change in barcode specifications (DataMatrix) through international change request (2020) to enable capture of entire stacks of containers with smartphone
- Tested readability on automatic conveyors

additional opportunities for the future



- using serialized GRAI for identification instead of a separate article label (GTIN) → SSCC only on pallet
- the serialized GRAI is fixed to the box across all processes
- the removal of the label is not necessary after each circulation and thus reduces the pooling costs



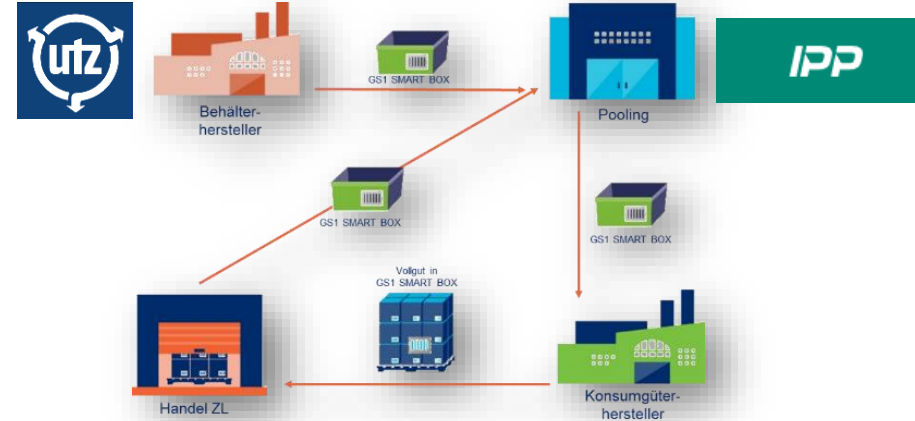
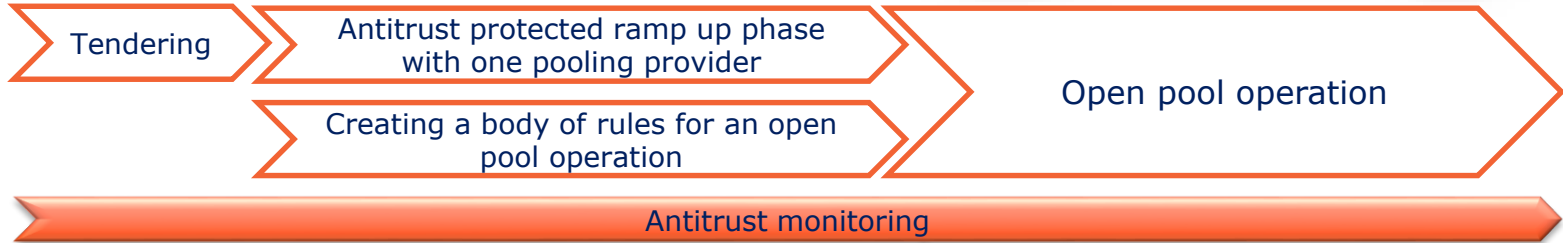
Designing returnable cycles



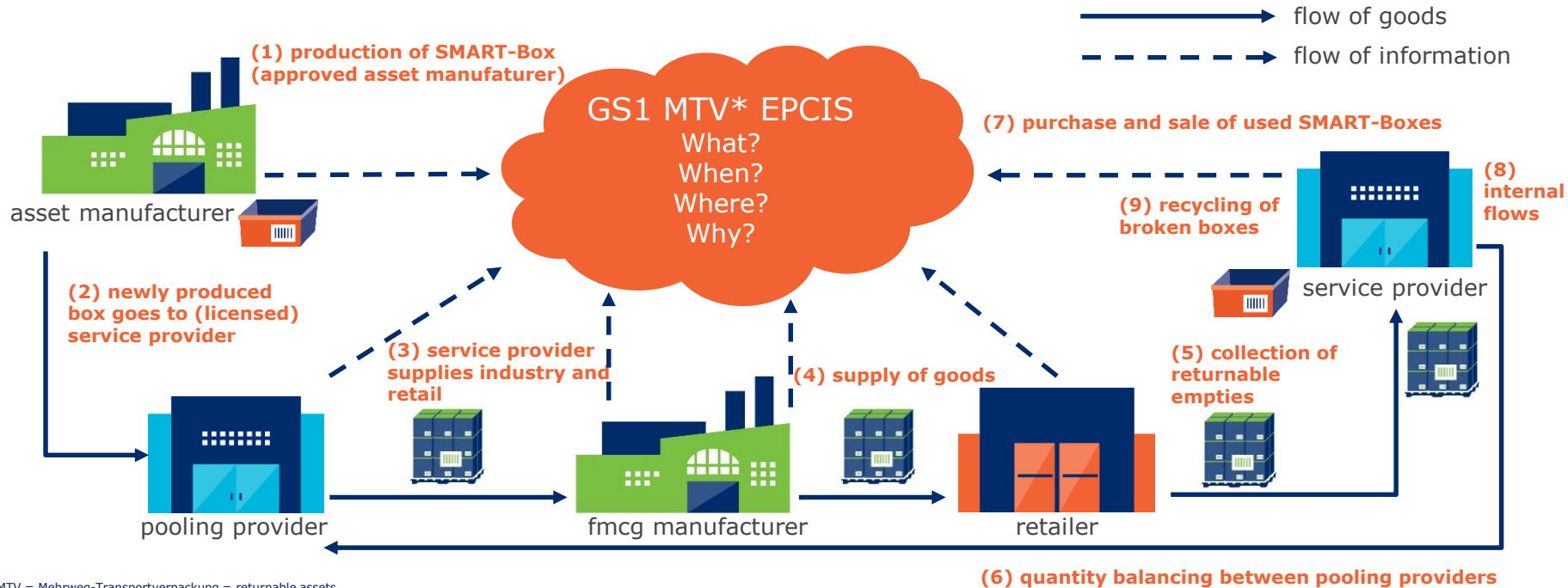
Optimal replenishment with highest possible sustainability in a circulating economy

- ✓ Low complexity
- ✓ High standards of quality
- ✓ No sorting effort in the supply chain
- ✓ Maximum service at low costs
- ✓ High availability even at seasonal peaks

Approach:

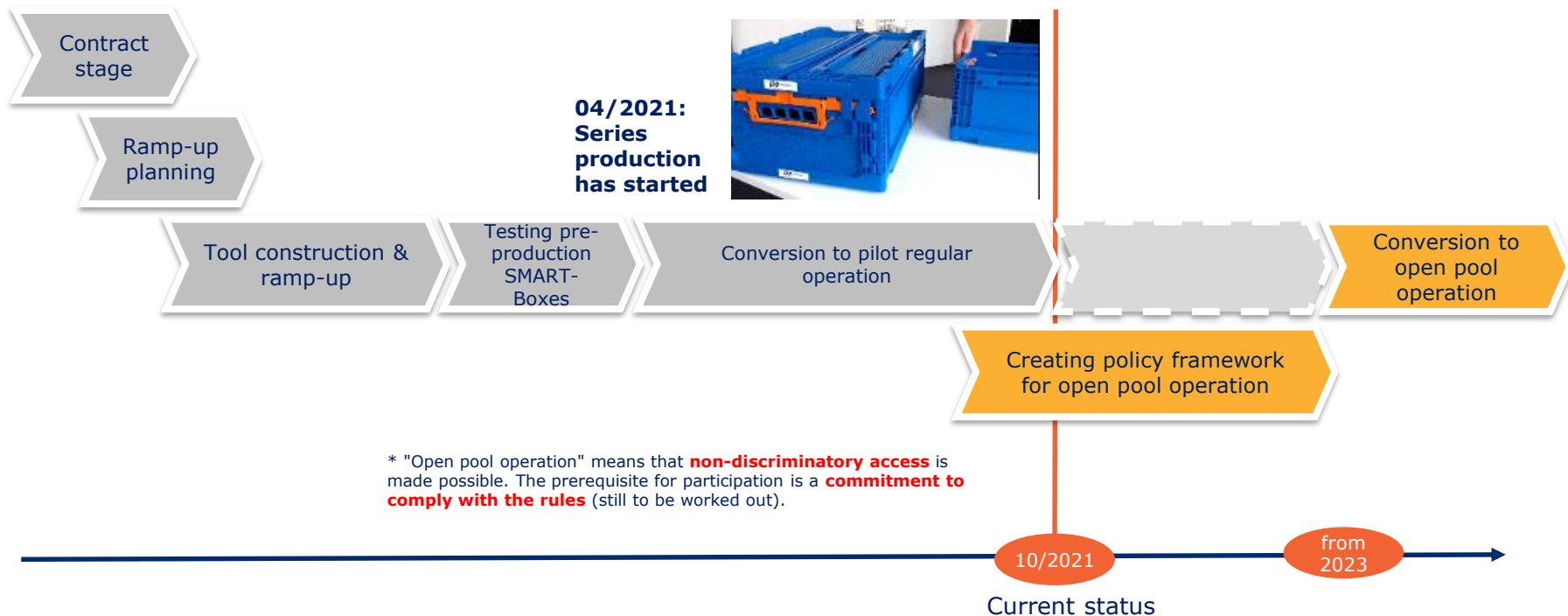


EPCIS provides a track & trace system for optimal circular economy



*MTV = Mehrweg-Transportverpackung = returnable assets

The start of series operation has taken place



We expect big things



2015

2021

from 2022

Project phase

START

Getting started

Successive expansion to further product lines

Drugstore



Drugstore



Sweets

DIY

Textile

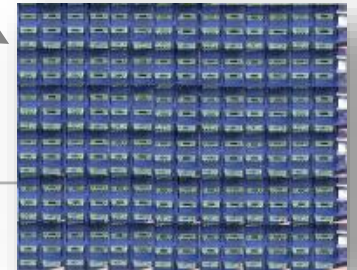
XXX

XXX

XXX



The Global Language of Business



We believe in it!



Beiersdorf



L'ORÉAL

MIGROS



THANK YOU

¡GRACIAS

GRAZIE

고맙습니다

OBRIGADO!

Teşekkürler

MERCI

DANKE



Germany



Matthias Haubenreißer

Senior Manager Competence Center Supply Chain Management /
Competence Center MTV

Tel: 0221 / 94714 446

mobil: 0160 / 47 65 821

mailto: matthias.haubenreisser@gs1.de

Contact

www.gs1-germany.de