

September 21, 2022 – 13:30 – Impulsvortrag

Lebenslauf für jedes Kunststoffprodukt

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The unique watermark for plastics!

what it enables



traceability



identity

brand trust



industry 4.0

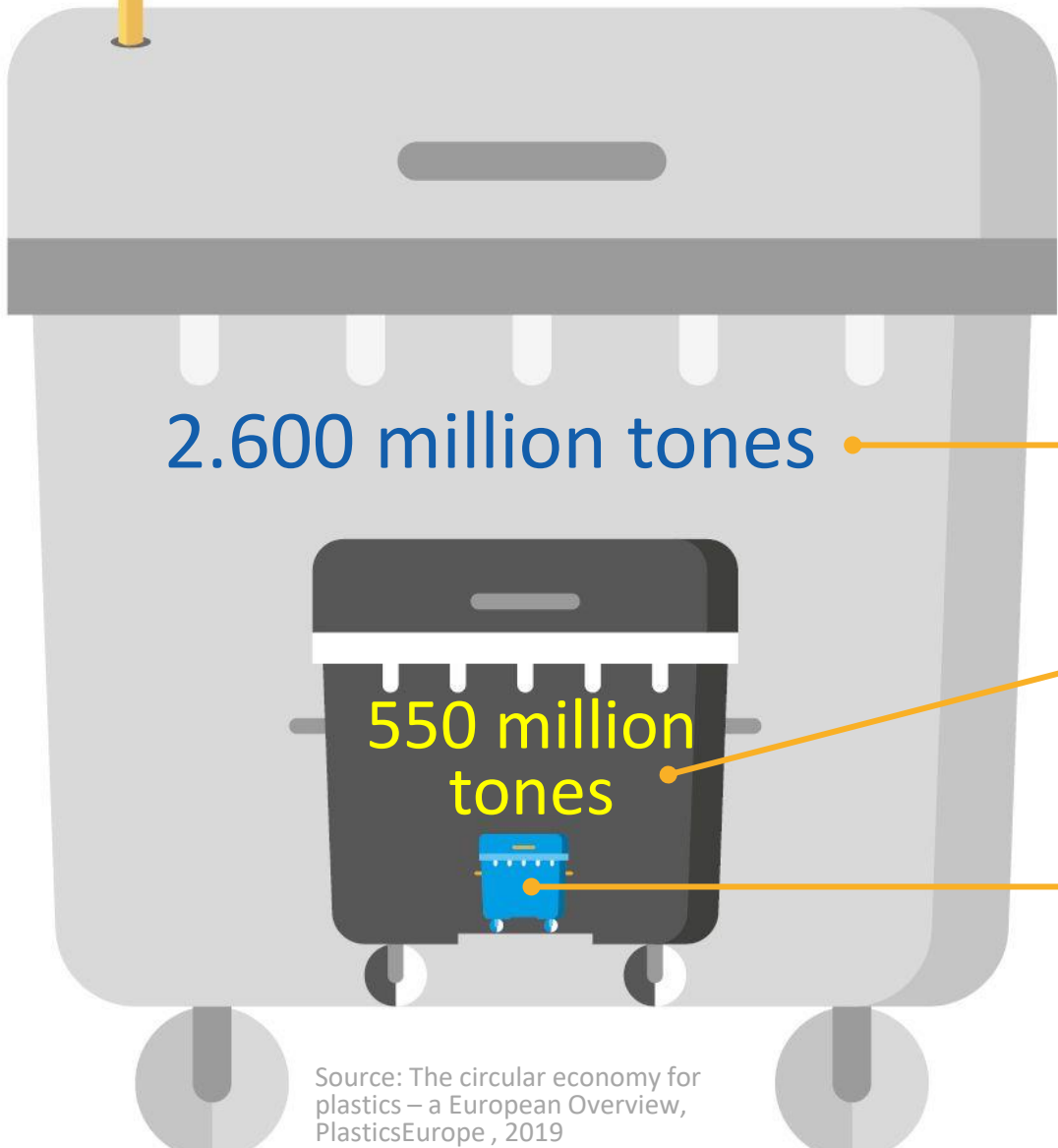


matrig

2018



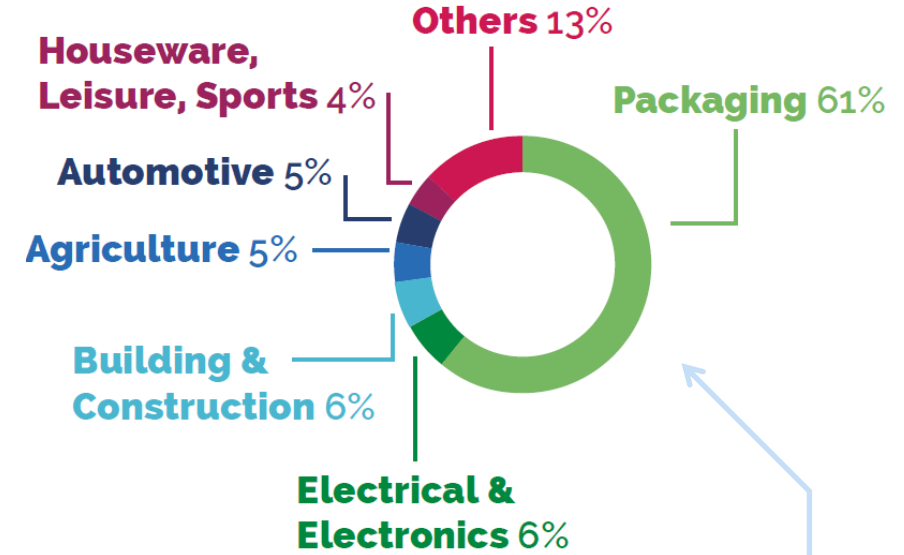
post-consumer plastics



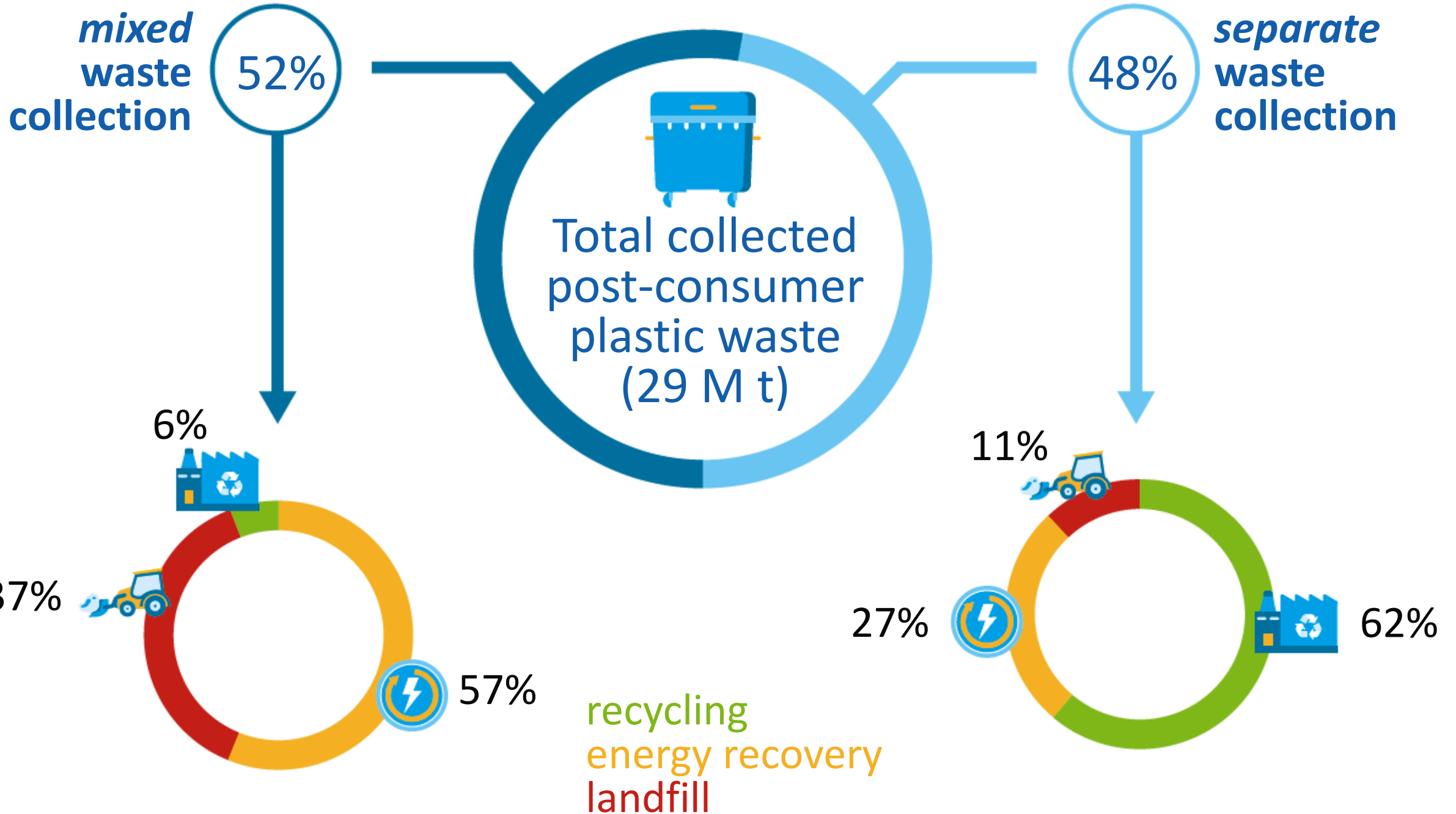
Total post-consumer waste collected

Total post-consumer waste collected in plastic relevant streams

Total post-consumer plastic waste collected via those streams



Source: The circular economy for plastics – a European Overview, PlasticsEurope, 2019



post-consumer recycled material

- use recycled materials (rPET, rPP, ...)
- bring PCR-based value proposition to market

- reduction of hazardous materials
- use recyclable materials
- produce lighter-weight products
- use plastics for “meaningful” products



materials



eco by desing

- design products “prone to be” recycled



fab-level recycling

external recycling



- introduce circular economies
- separate, identify, and collect “unmixed” batches
- create awareness, educate people and provide opportunities for recycling
- advance chemical recycling technologies
- use highly productive and efficient processes
- back-feed production-site waste and rejects

post-consumer recycled material

- use recycled materials (rPET, rPP, ...)
- bring PCR-based value proposition

external recycling



helpful / important to know the origin and fate of plastics product in their life cycle by track & trace!

- reduction of hazardous materials
- use recyclable materials
- produce lighter-weight products
- use plastics for "meaningful" products

- produce circular economies
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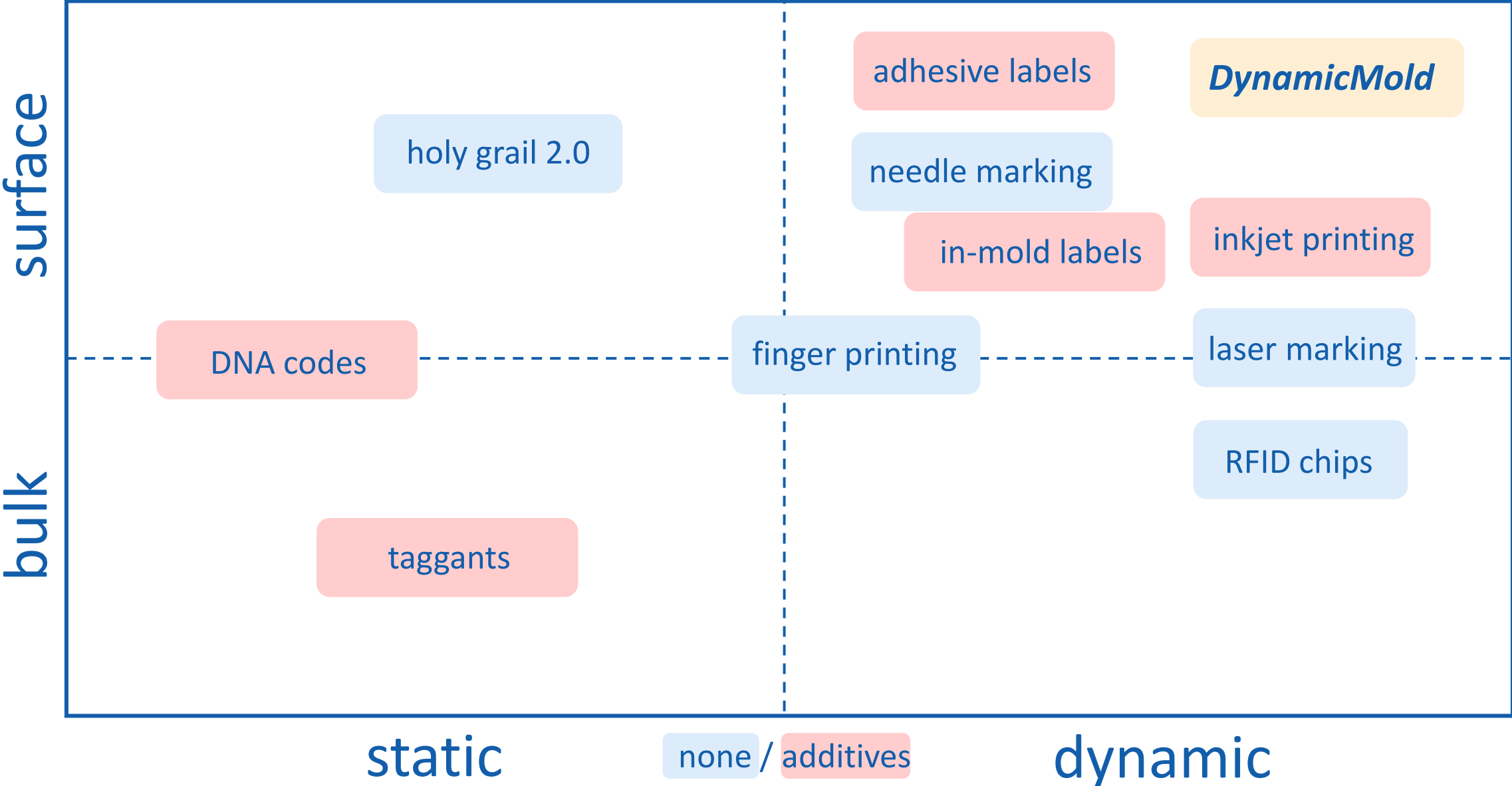
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- back-feed production-site waste and rejects



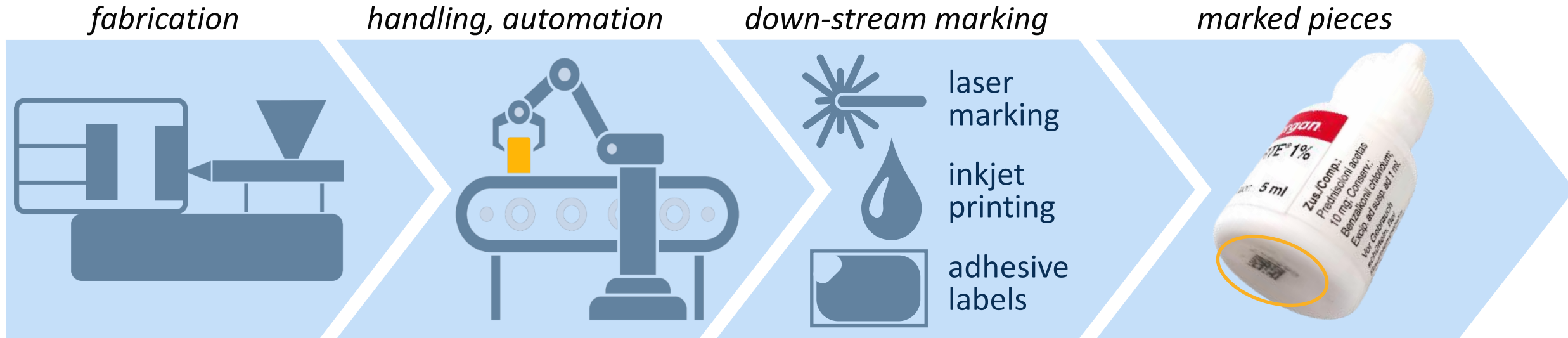
materials



fab-level recycling



the problem: today's marking is costly and complex...



... but often required or mandatory for:



track and trace along the product life cycle

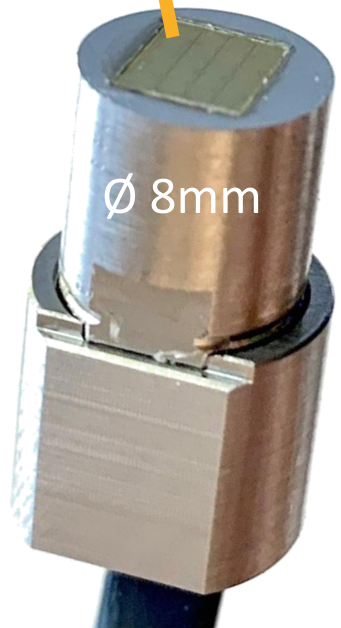
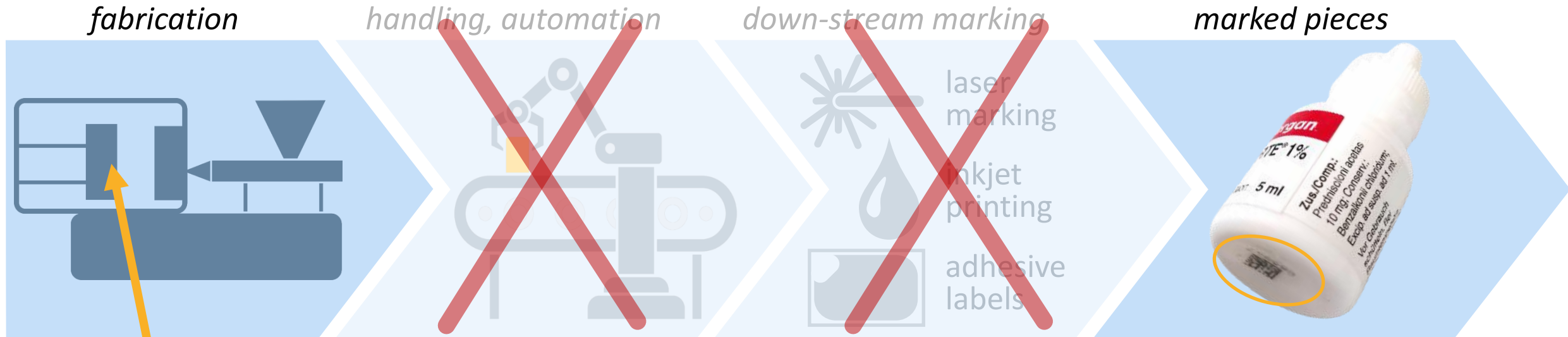


brand protection & legal compliance



quality control & all process data

the solution: integrated in-mold ultrafast marking



Ø 8mm

in-mold
marking insert
patents granted



size comparison

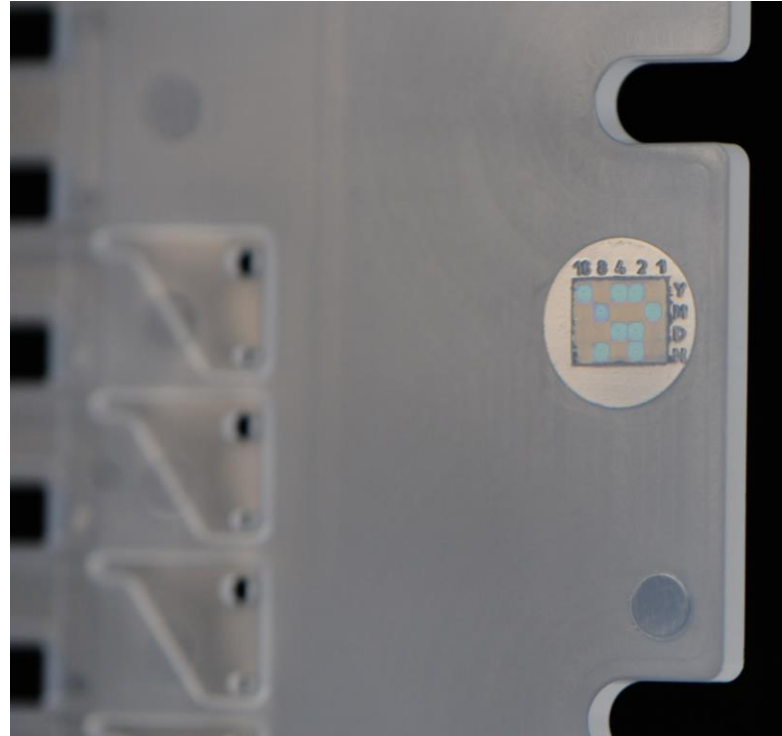
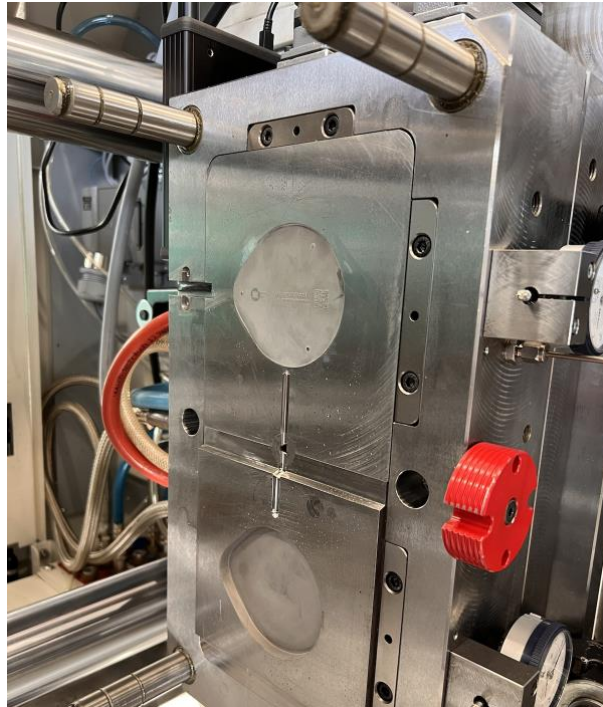
- + ultra-fast within forming cycle
- + all standard polymers
- + >60% cost reduction

our innovative solution: *DynamicMold* variable marking in action

see our non-public video here: youtu.be/C6bYhmjv7iU



DM-date: date and time stamp on your products





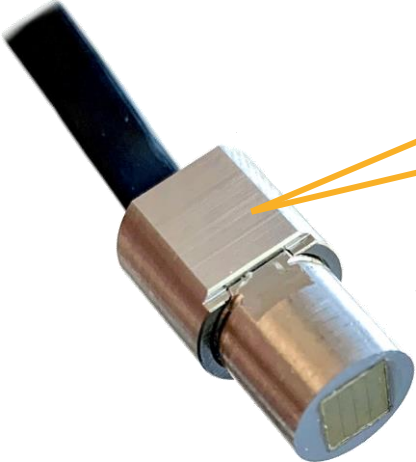
mounting mold insert

*see our public video here:
youtu.be/Px51vaNyN30*

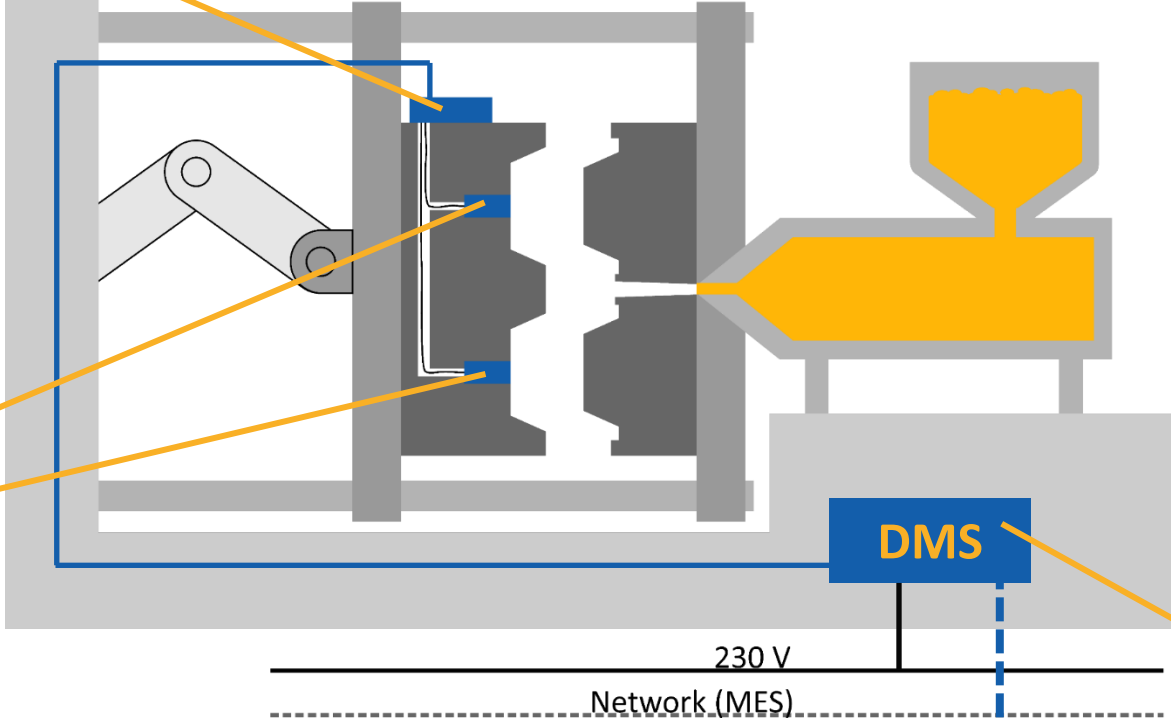
DM-date: system overview



The inserts are controlled by the "DMC", sitting on the outer side of the mold tool



DM-date mold insert



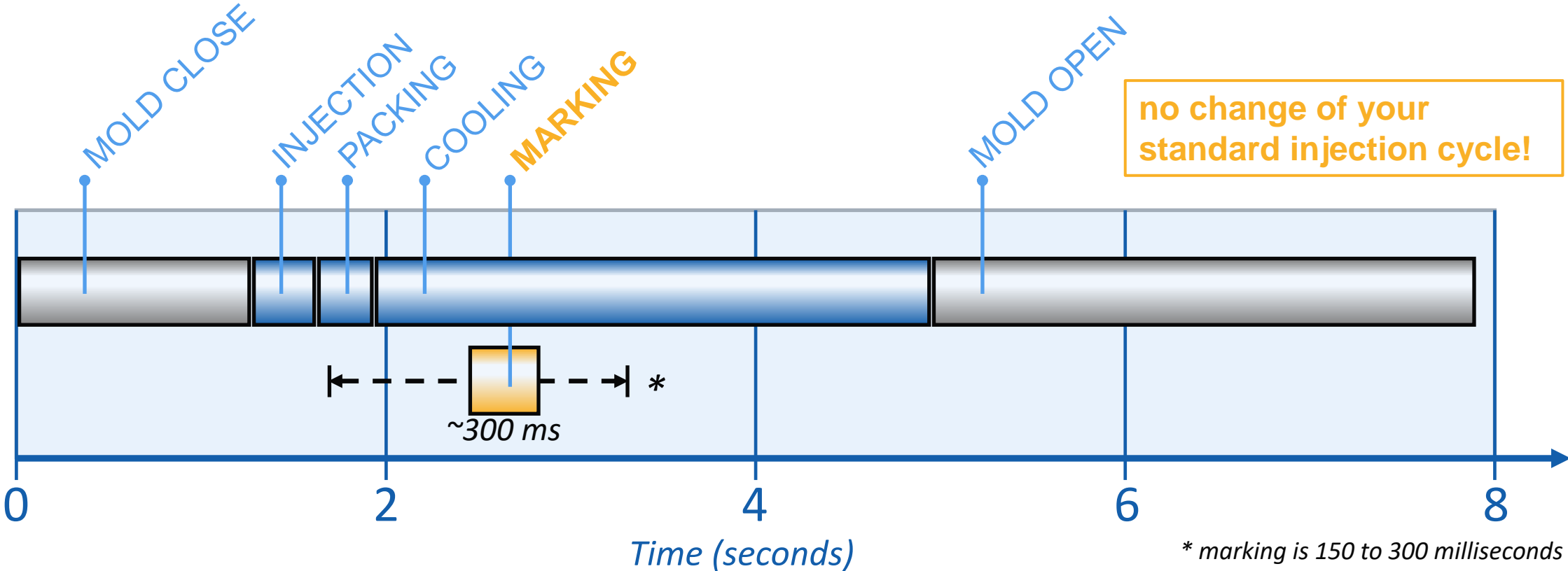
Browser interface for system configuration



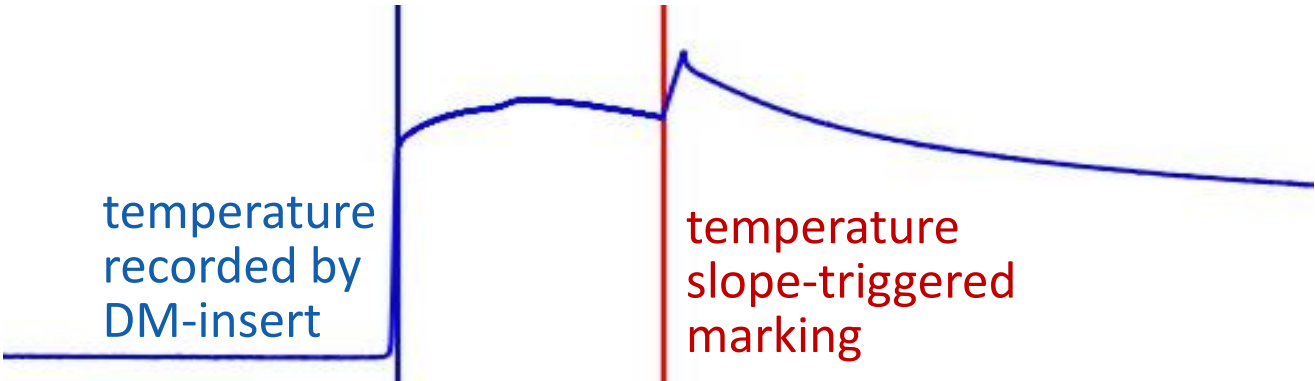
The "DMS" (DynamicMold Supervisor) provides the interface to the Network



injection molding cycle incorporating marking by *DynamicMolding*



* marking is 150 to 300 milliseconds within the timeframe of packing /cooling phase, depending on the specific polymer used

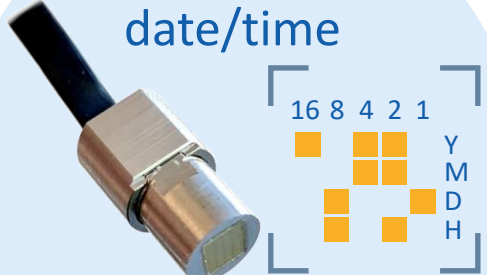


matriq's products roadmap

for in-mold, ultrafast, individual direct part marking

DM-date

4x5 code for date/time




world's first digital date & time stamp

16 8 4 2 1
Y M D H

mold.iq

enables the identification and surveillance of mold tools



CE

DM-qode


14x14 code serial number



(*)

data management

digital twin
serial number
process-parameters
meta-data



2022

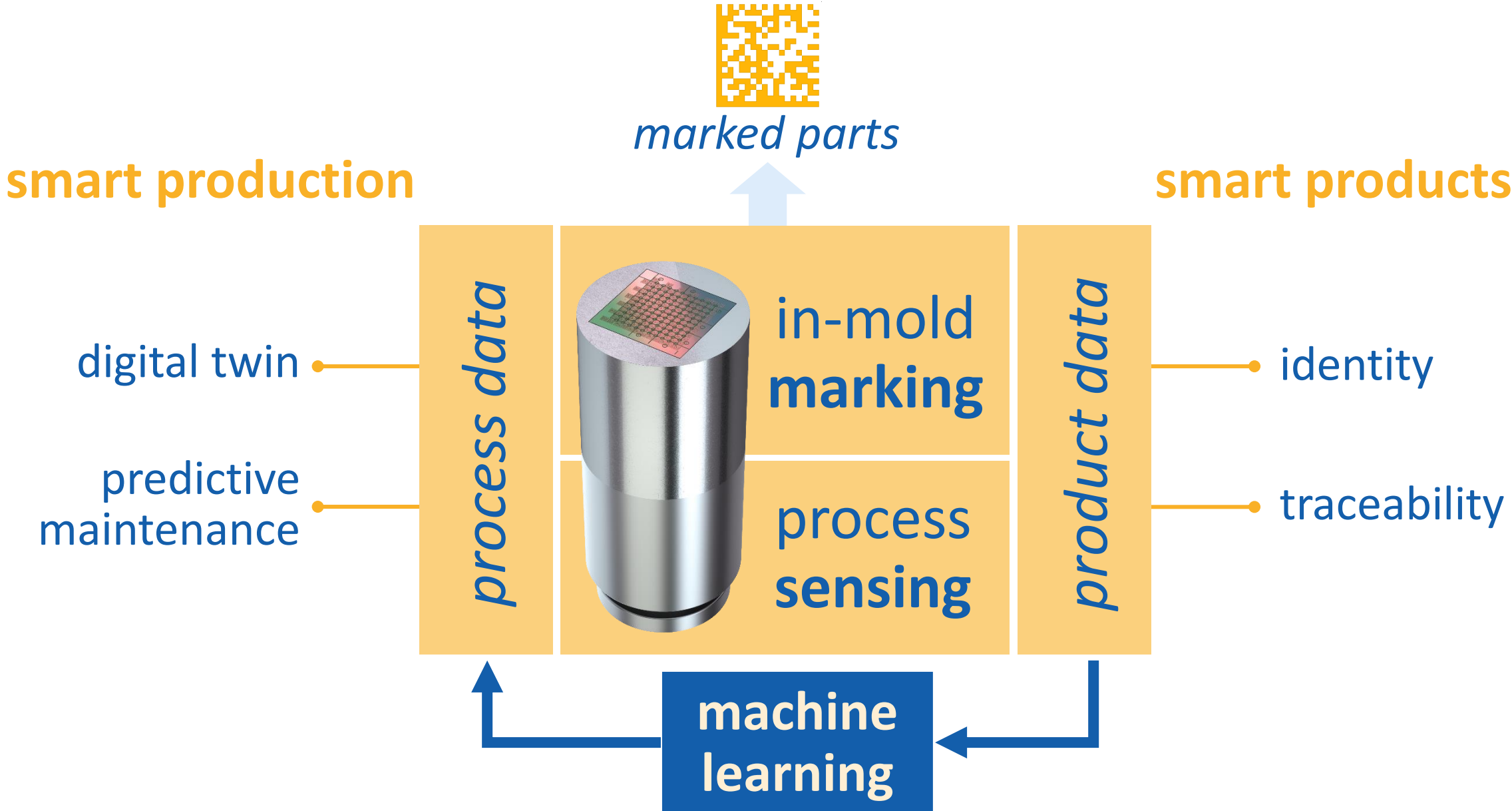
2023

* DM-brand

customized version for brand protection / authenticity



DynamicMold combines smart production with smart products



process

efficient and affordable process control also for material variations of recycling

traceability

follow the product along its value chain and have all data about its use and end-of-life

productivity

gain higher yields and create less waste and rejects by “predictive product performance”

valorize plastics

efficient and sustainable use of plastics products

The unique watermark for plastics!

Our vision

matriq is the worldwide leading solution provider of plastic product marking for traceability, unique identification, and brand trust.



matriq AG

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