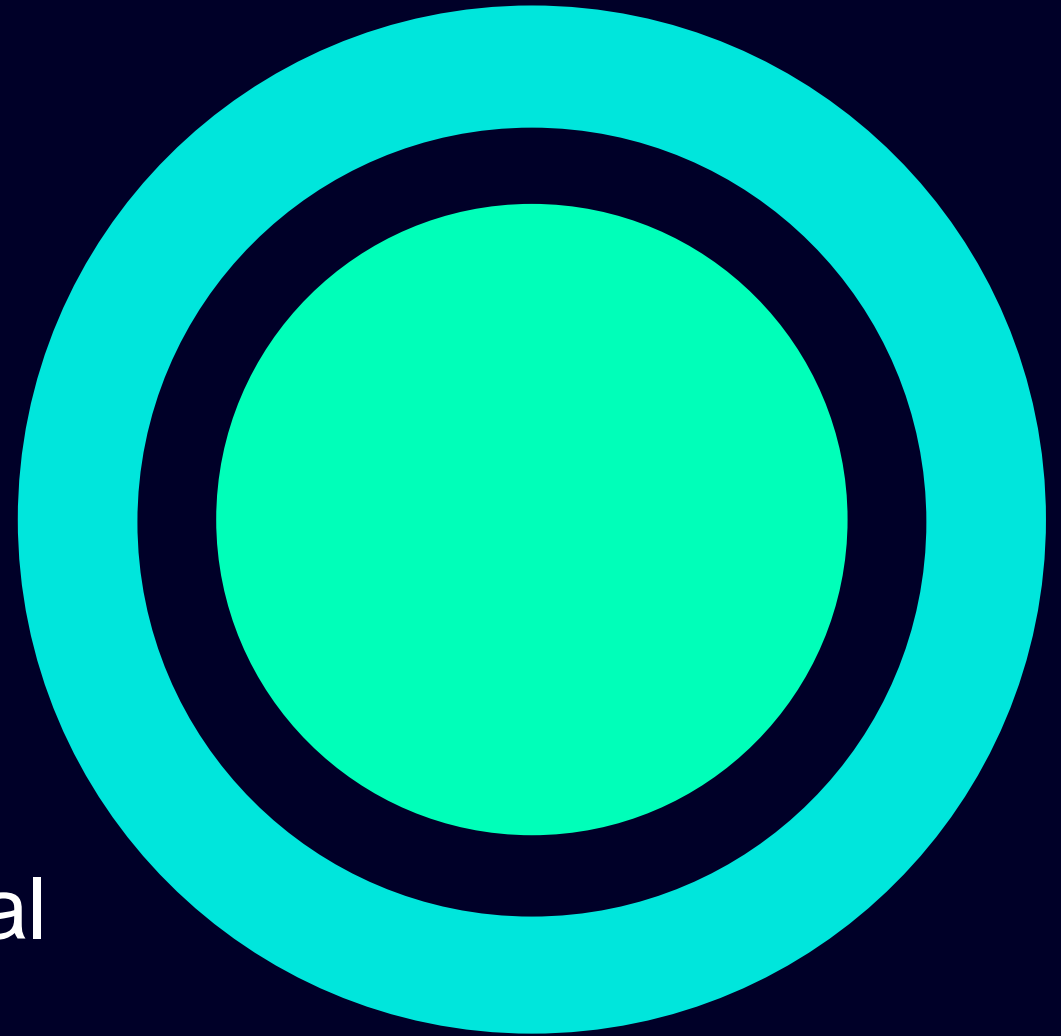


Sustainable plastics

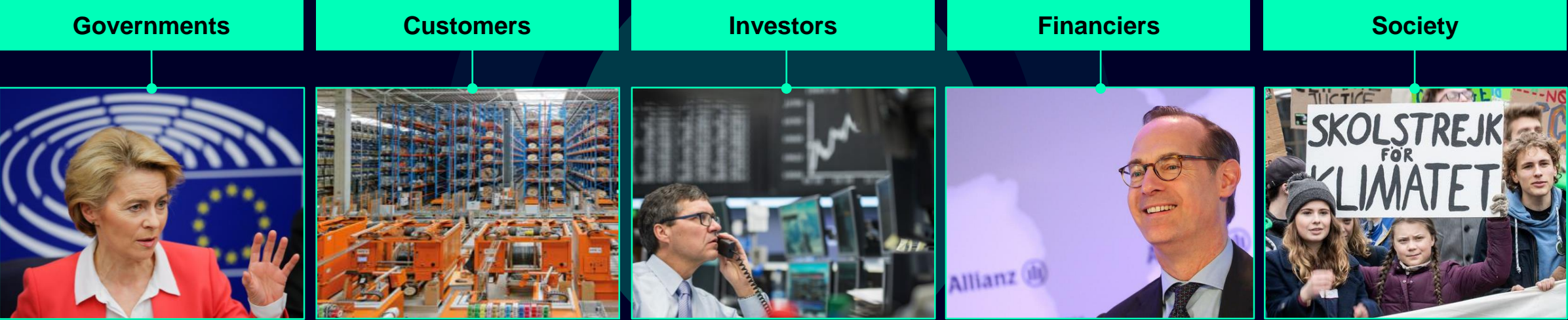
Requirements for quality-assured
use of recycled plastics in technical
applications (E&E)

International conference on recycling of plastics / June 06th - 07th, 2023



The relevance for sustainability for all Siemens business is increasing

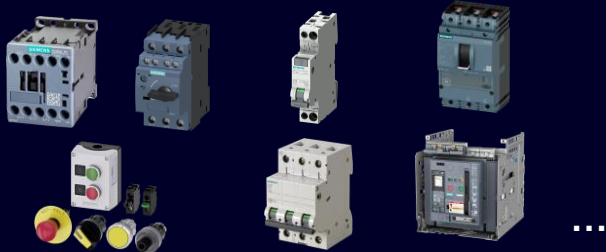
Our stakeholder expect transparency, compliance with rules and measurable measures



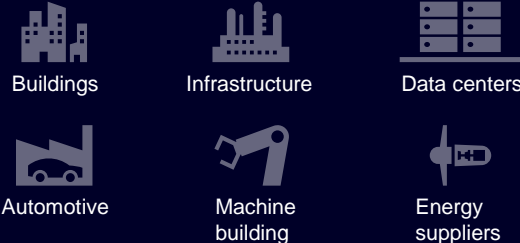
Requirements for quality-assured use of recycled plastics in technical applications (E&E)

Product requirements

Products



Key verticals



Standards & specifications



Part requirements



There are high requirements for our plastics (in devices) which must be complied under product safety

Technical requirements



Thermal behavior



Electrical behavior



Mechanical behavior



Fire behavior



Optical behavior

Material composition

Type of polymer

Type of polymer

Reinforcement fiber

Flame retardant

Additives

In most cases **compounds** are used!

PA6-GF20 FR

PBT-GF20 FR

UP-GF10 FR

...

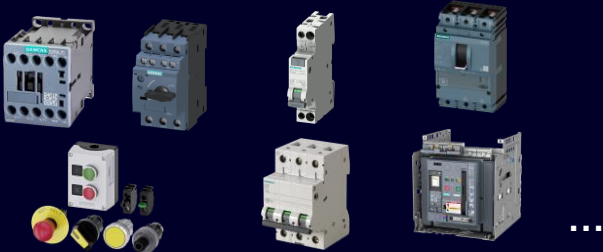


Reinforcing material and flame retardant are needed due to the technical requirements

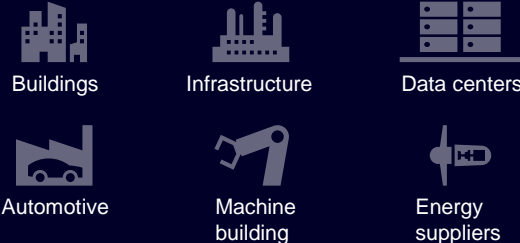
Requirements for quality-assured use of recycled plastics in technical applications (E&E)

Product requirements

Products



Key verticals



Standards & specifications



Part requirements



Technical

- Thermal behavior
- Electrical behavior
- Mechanical behavior
- Fire behavior



Supply chain

- Resilience
- Local availability
- Competitiveness



Sustainable

Definition of the sustainability criteria of plastics to enable sustainable products

Action fields for materials



Minimize CO₂ emissions



Avoid hazardous substances



Design for circularity



Zero waste



Requirements for sustainable plastics

(part of the Robust Eco-Design)

Environmental performance indicators

- ✓ CO₂ footprint
- ✓ Biodiversity
- ✓ Water consumption
- ✓ ...

Substance Policy

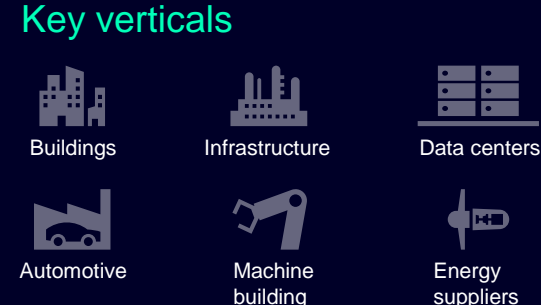
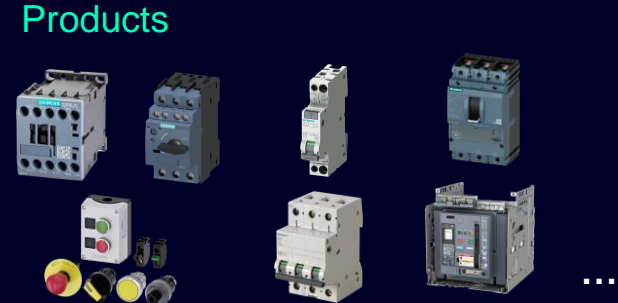
- ✓ Material compliance
- ✓ Substance of very high concern
- ✓ Critical raw materials
- ✓ ...

Capabilities for circularity

- ✓ Use of secondary plastics
- ✓ Repairability
- ✓ Reusability
- ✓ Recyclability
- ✓ ...

Requirements for quality-assured use of recycled plastics in technical applications (E&E)

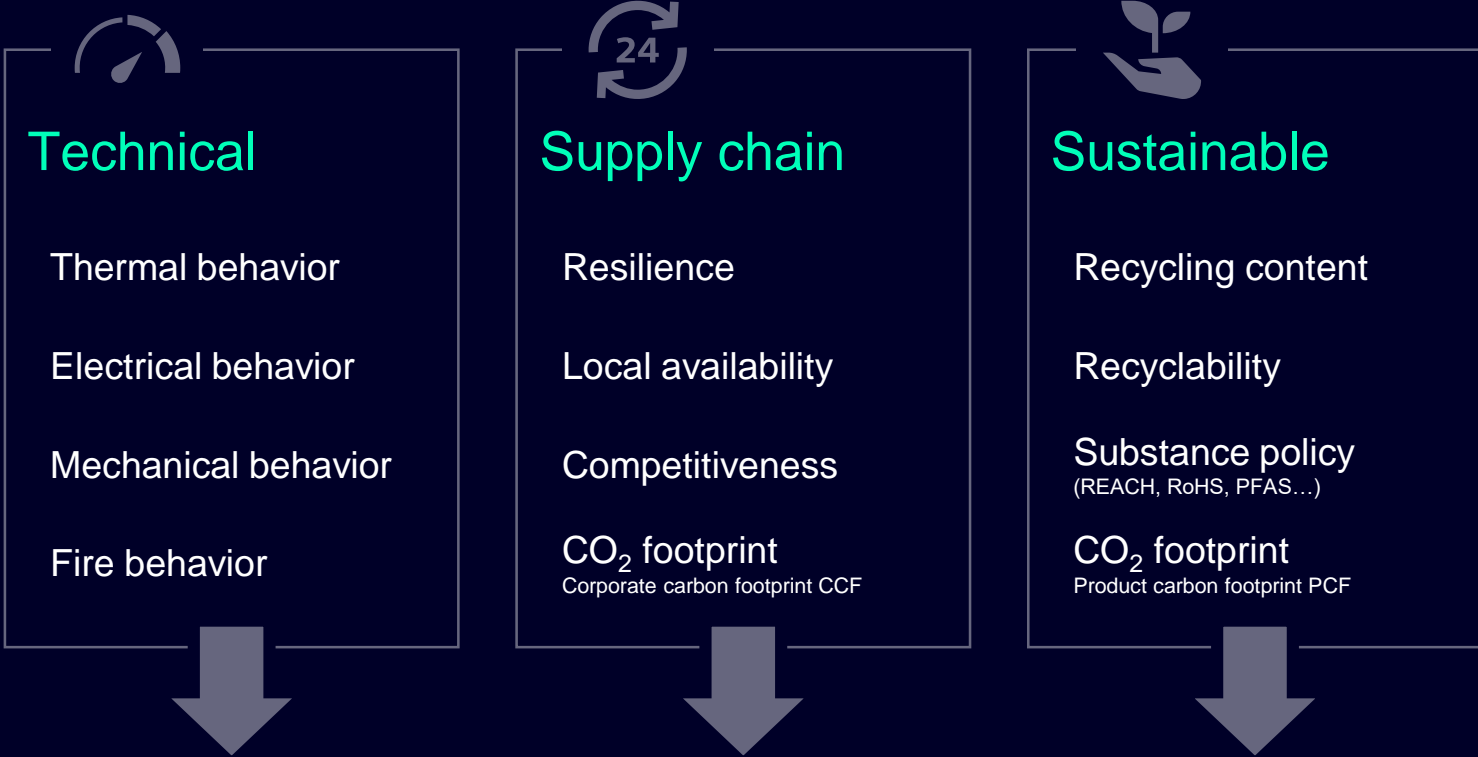
Product requirements



Standards & specifications



Part requirements



Quality assurance

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