

Substituição de metal por plástico

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Application Development

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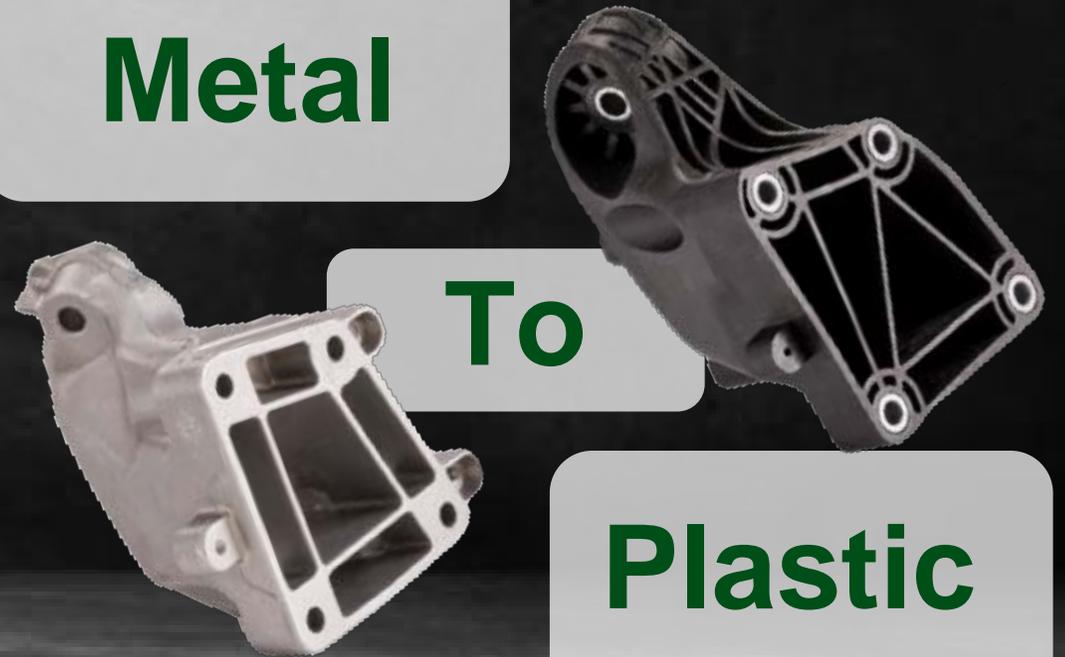
Phone: +55.950588257

22-Set-21

Metal

To

Plastic



Agenda

BASF

1- Introdução

2- Benefícios

3- Suporte BASF

Metal

To

Plastic



BASF no mundo

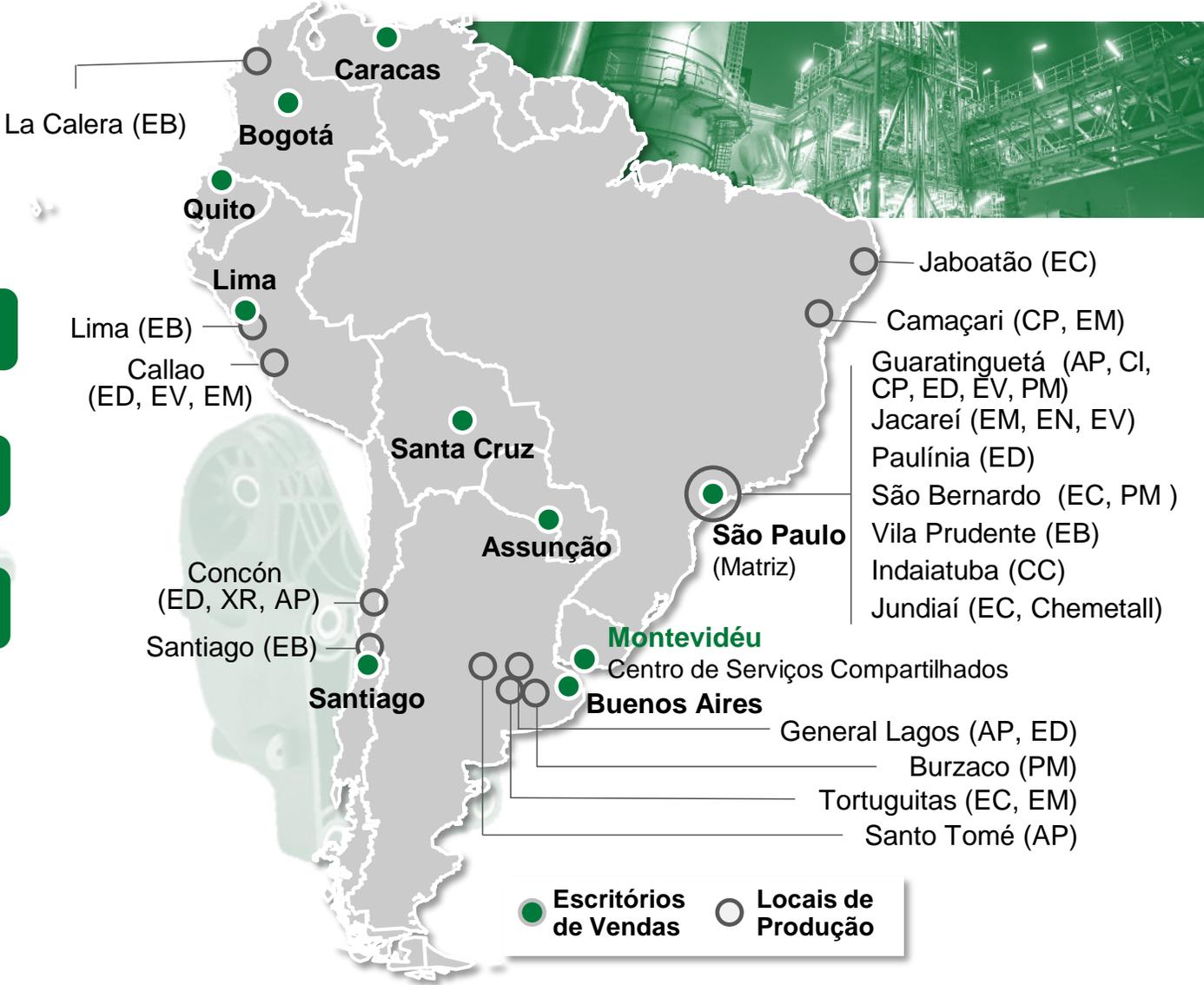
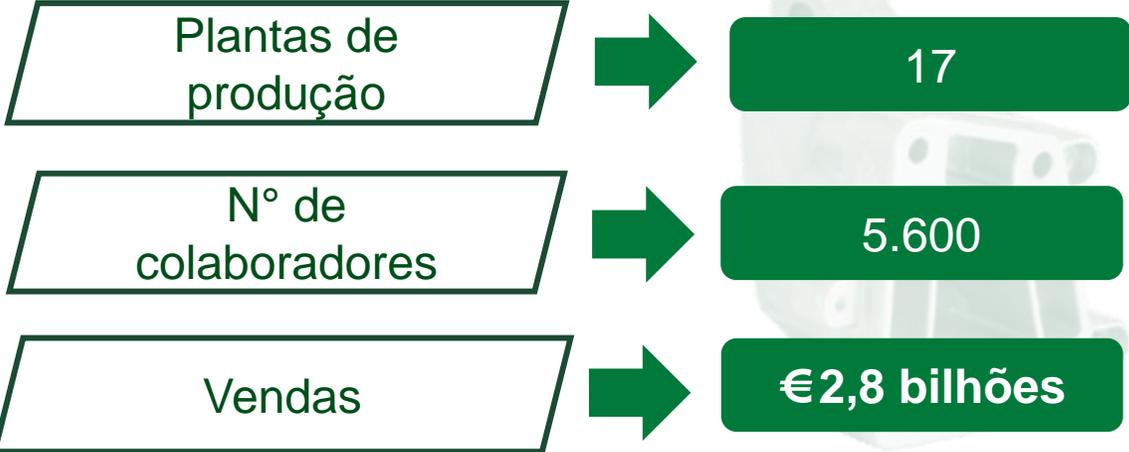
Plantas de produção	→	355
Nº de colaboradores	→	122.404
Nº de clientes	→	90.000
Vendas 2018	→	€ 62,7 bilhões



- Química da BASF pode ser encontrada em quase todas as outras indústrias



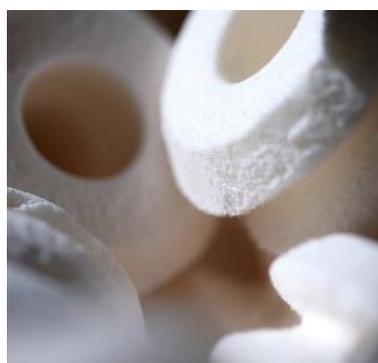
BASF na América do Sul





Químicos

Performance Materials
intermediários



Materiais

Materiais de
Performance
Monômeros



Soluções Industriais

Dispersões & Pigmentos
Químicos de Performance



Tecnologias de Superfície

Catalisadores
Tintas



Nutrição & Cuidados

Nutrição & Saúde
Care Chemicals



Soluções para Agricultura



Materiais

Materiais de
Performance
Monômeros

Nosso portfólio

Plásticos de engenharia

Ultramid[®] A
(PA66)

Ultramid[®] B
(PA6)

Ultramid[®] Adv
(PPA)

Ultradur[®]
(PBT)

Ultraform[®]
(POM)

Especialidades plásticas

ecovio[®], ecoflex[®]
(biodegradáveis/
compostáveis)

Basotect[®] (espuma
de melamina)

Ultrason[®] (sulfonas:
PSU, PESU, PPSU)

Poliuretanos

Elastopor[®]

Elastopir[®]

Elastospray[®]

Elastocool[®]

Elastoflex[®]

Elastofoam[®]

Elastolit[®]

Elasturan[®]

Elastopan[®]

Cellasto[®]

Infinergy[®] (E-TPU)

Elastollan[®] (TPU)

(Sistemas de PU)

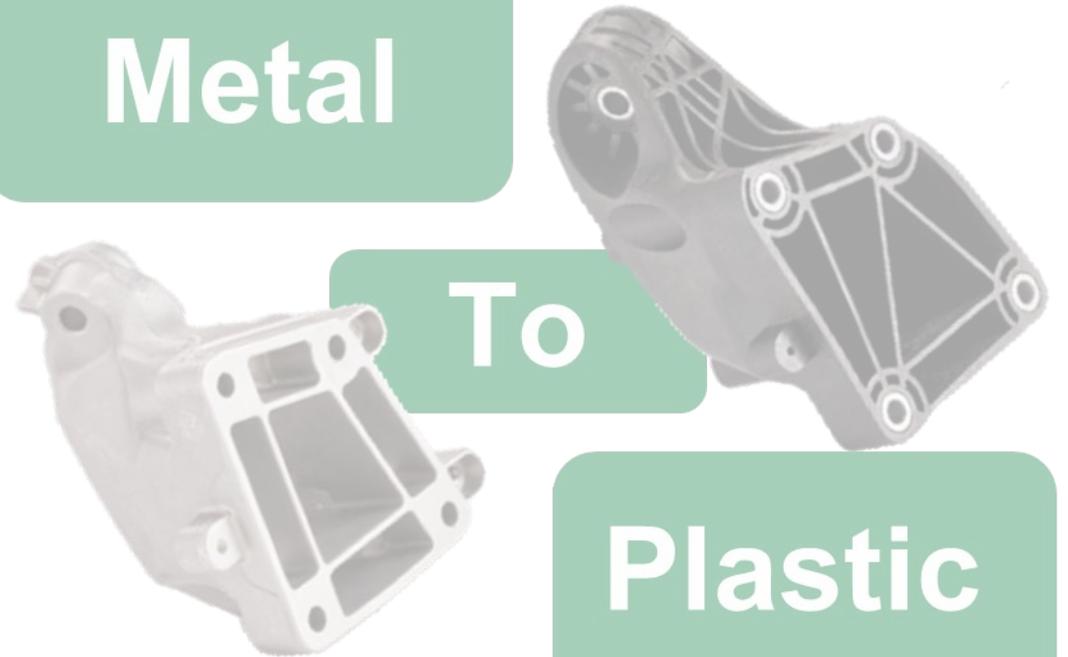
Introdução

1/3

Metal

To

Plastic





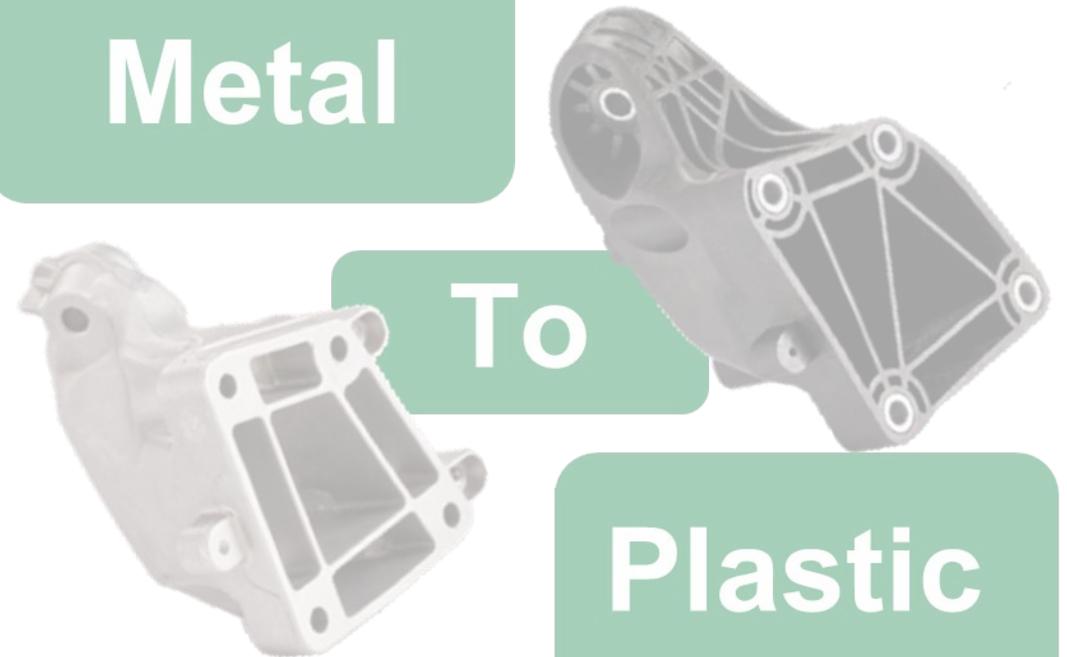
Benefícios

2/3

Metal

To

Plastic



2- Benefícios

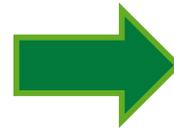


2- Benefícios

Densidade



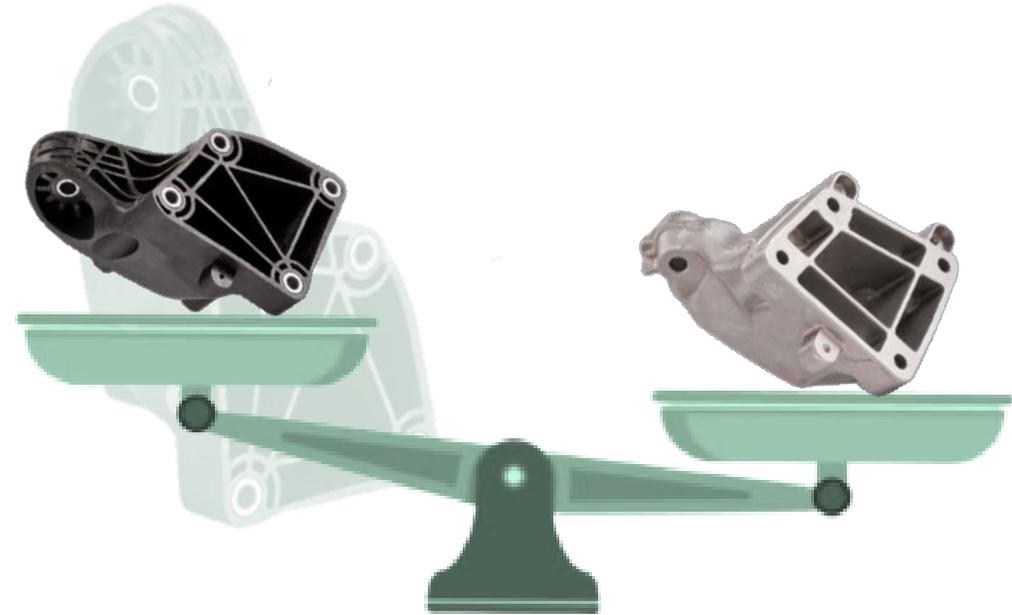
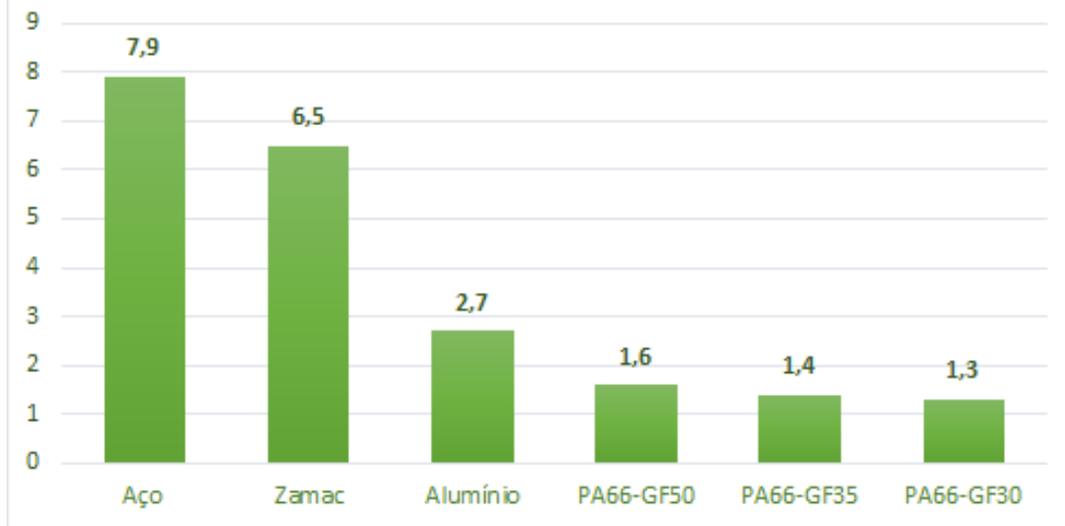
Design



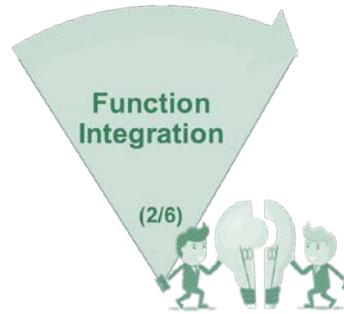
Mais de 50% de redução!



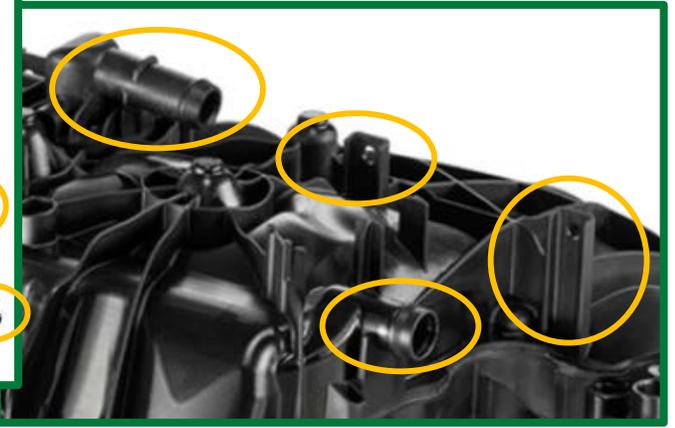
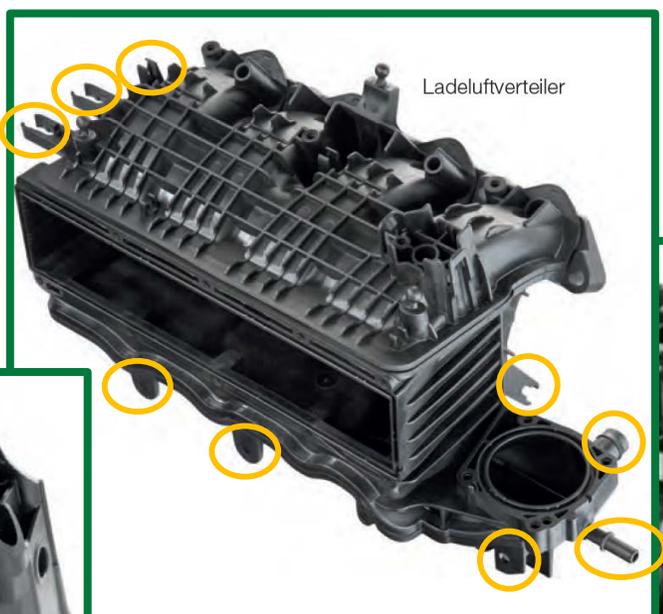
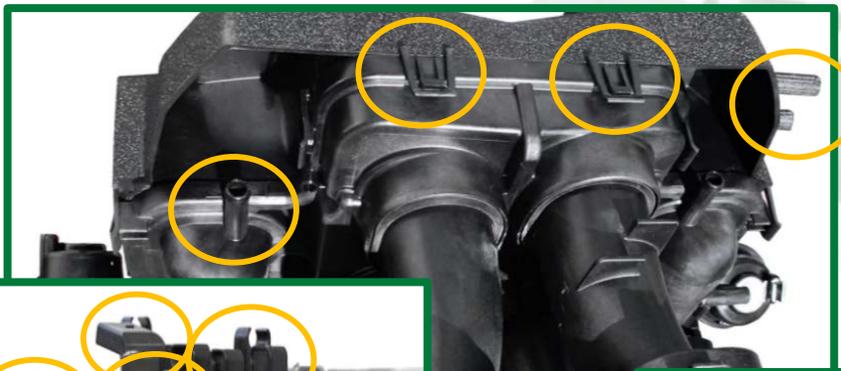
Densidade dos materiais (g/cm³)



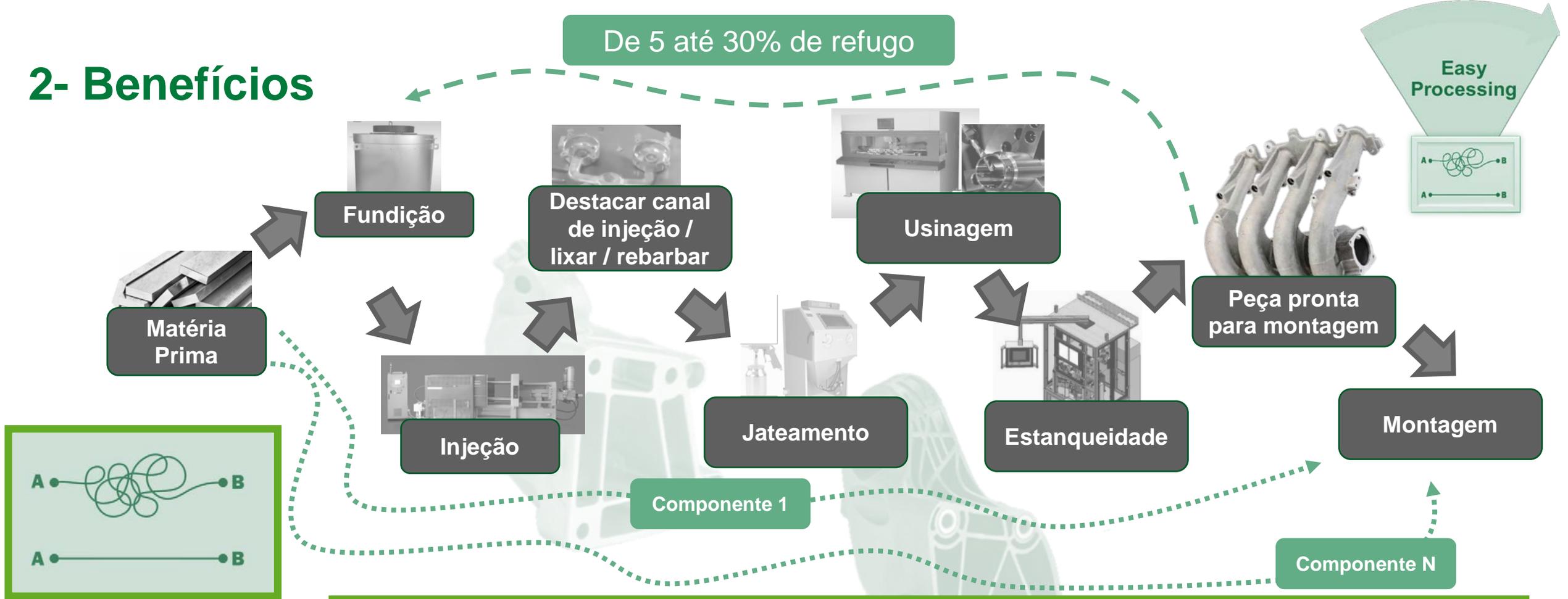
2- Benefícios



Fazer mais em uma única injeção



2- Benefícios



Matéria Prima



Secagem



Injeção +
insertos

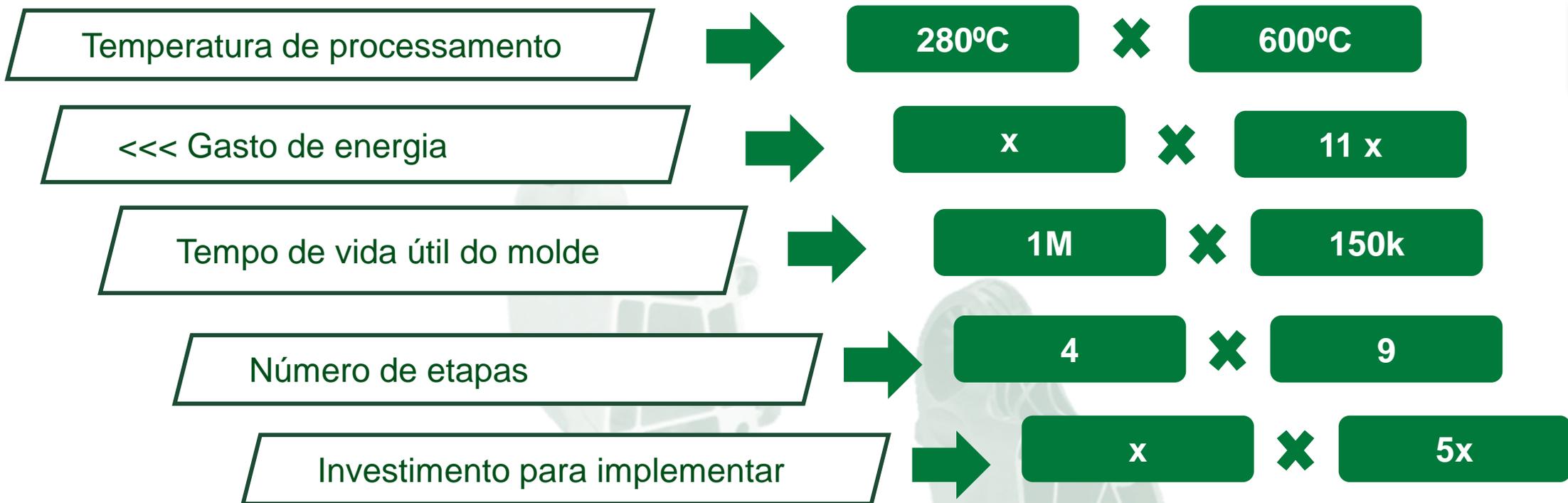
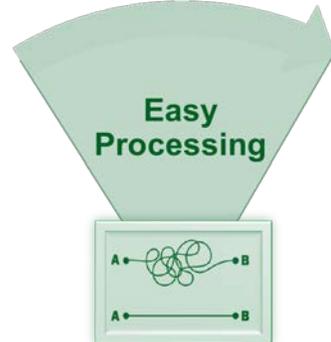


Peça pronta
para montagem

Montagem

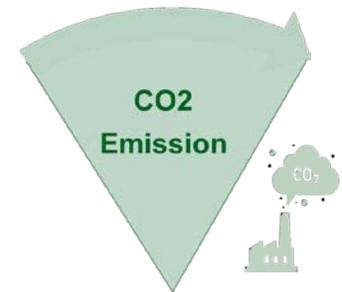
BASF
We create chemistry

2- Benefícios



Fluidez do material =
permite peças complexas
e com alta performance

2- Benefícios



Sustentabilidade

Produção de matéria prima



Processo de transformação



Durante a vida útil da aplicação



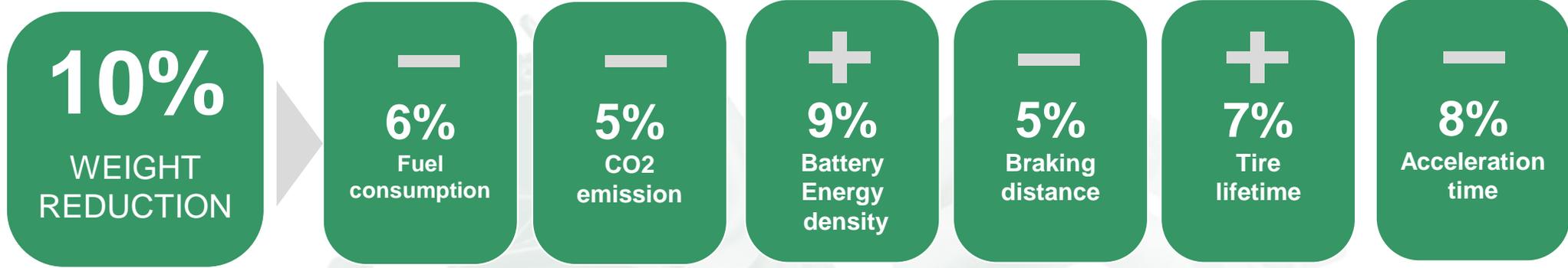
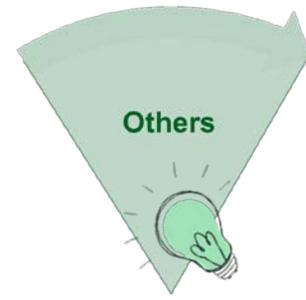
Após término da vida útil



2- Benefícios



2- Benefícios



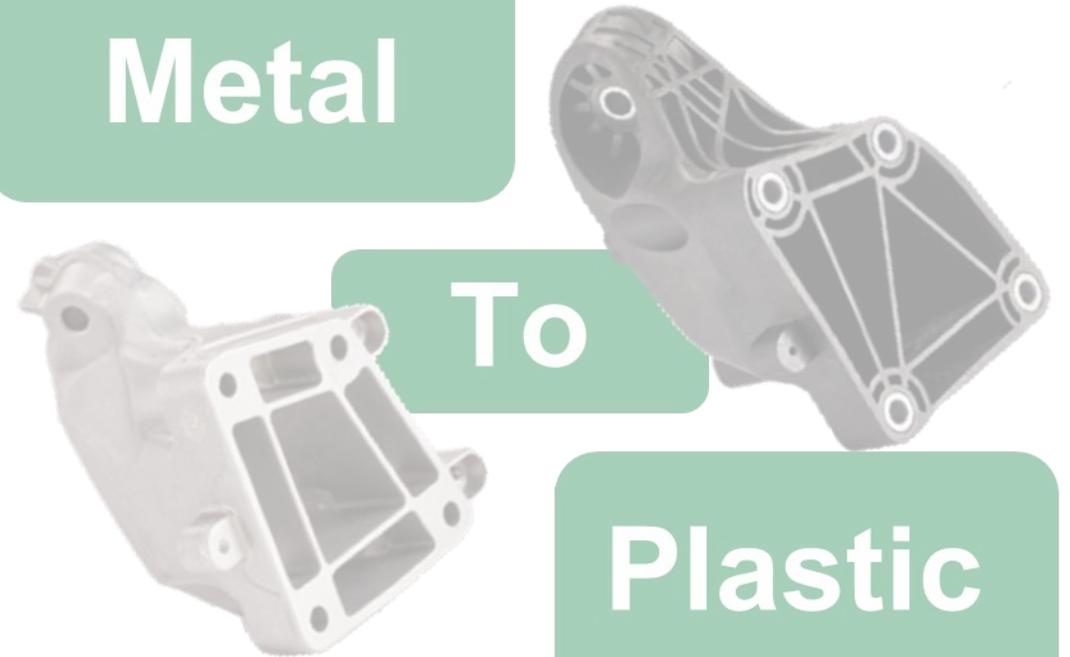
Suporte BASF

3/5

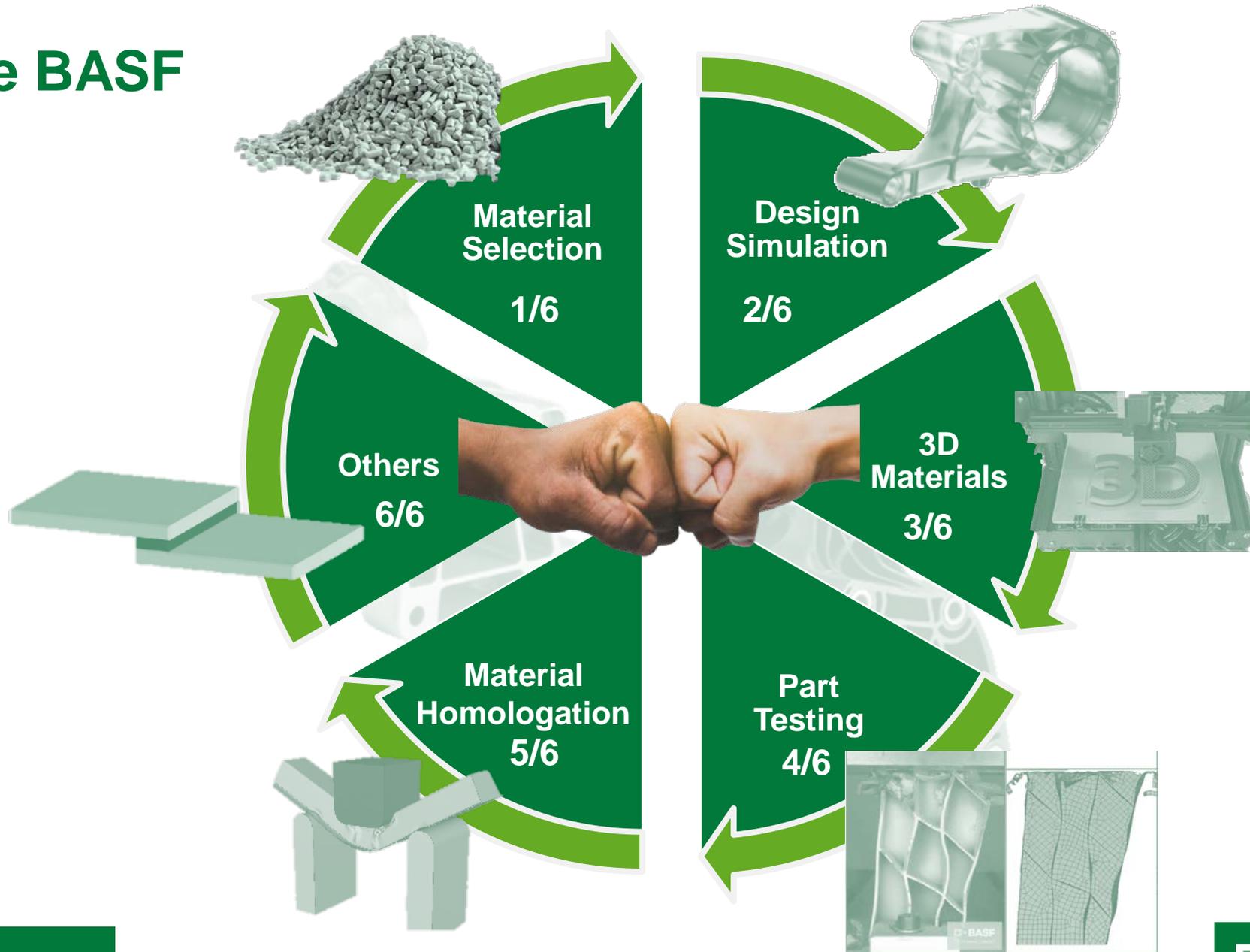
Metal

To

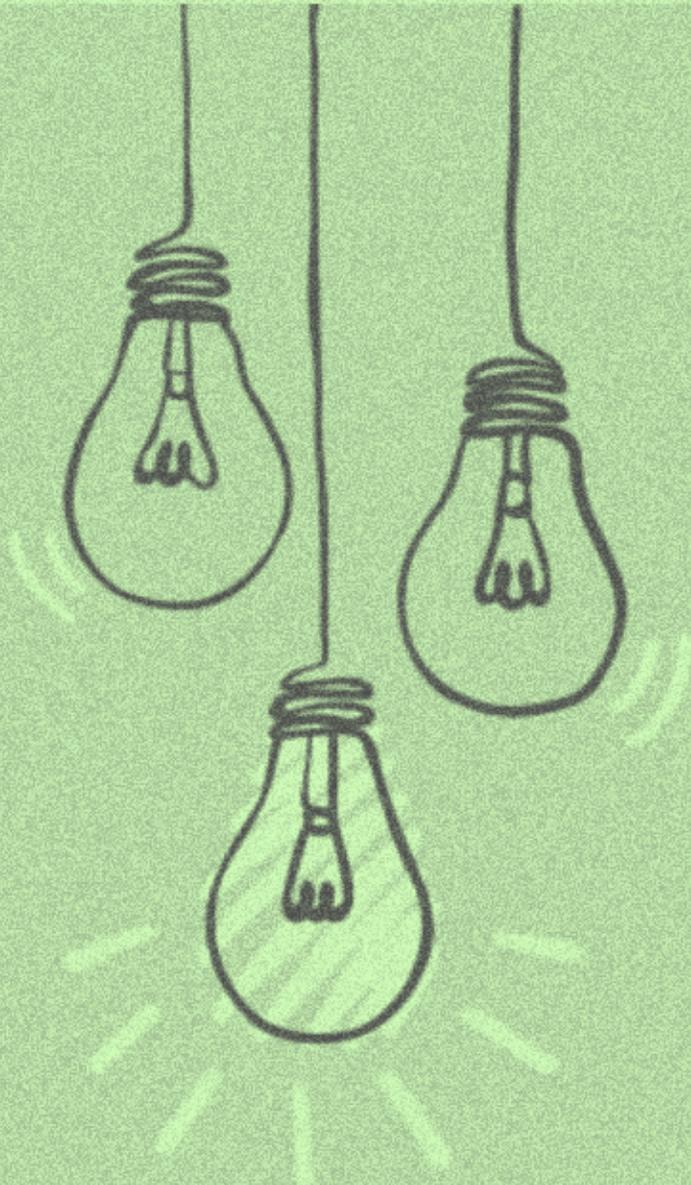
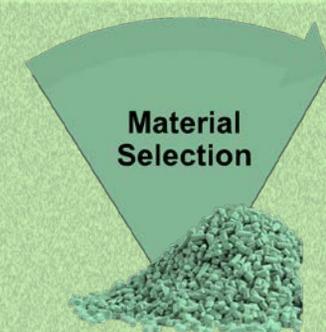
Plastic



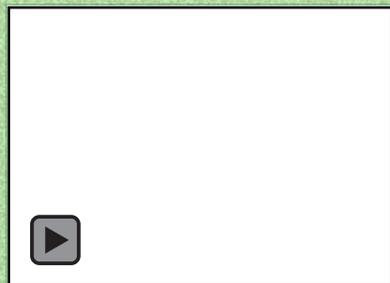
3- Suporte BASF



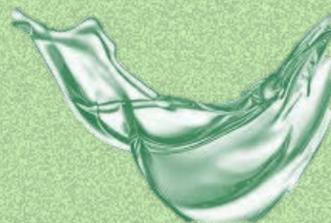
Qual material utilizar?



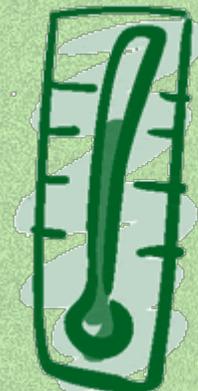
Resistência mecânica?



Resistência química?



Resistência Térmica?



Outros?



3- Suporte BASF



Unfilled Grades

Mineral filled Grades

Glass filled Grades

Long Glass filled Grades

PPA

PA6 – Ultramid B
PBT – Ultradur
PA66 – Ultramid A

PA6 – Ultramid B
PBT – Ultradur
PA66 – Ultramid A
(10 – 40%)

PA6 – Ultramid B
PBT – Ultradur
PA66 – Ultramid A
(10 – 65%)

PA6 – Ultramid B
PBT – Ultradur
PA66 – Ultramid A
(40-65%)

PPA – Ultramid Advanced

Resistência Mecânica



3- Suporte BASF



**(180°C)
Standard
Grades**

**(190°C)
Improved Temperature
Resistance**

**(210°C)
Superior Temperature
Resistance**

**(220°C)
Extreme Temperature
Resistance**

**Ultramid
Advanced
PPA**

**Ultramid® A3WG7-G10
Ultramid® A 218 V35-V50**
Cont. use temperature 180°C

**Ultramid® A3W2G6-G10 /
Ultramid® RED A218 HPS V35**
Improved property retention to 190°C

Ultramid® A3W3G10
Superior property retention
to 200-210°C

Ultramid® Endure D3G10
Extreme property retention
to 220°C

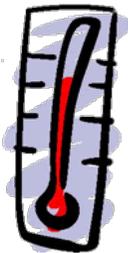
**Ultramid® B3WG6-G10 /
Ultramid® C 218 V30-V50**
Cont. use temperature 130°-170°C

Ultramid® B3P6G6
Improved property retention to 190°C

Ultramid® A3W3G7
Superior property retention
to 200-210°C

Ultramid® Endure D3G7
Extreme property retention
to 220°C

Resistência Térmica



3- Suporte BASF



PA6

PA66

PA66+

PA6.10

PPA

-Ultramid B3K
-Ultramid B3WG6
-Ultramid CA 218 v30

Ultramid A3WG6
Ultramid A3WG6 HG
Ult. A 218 V30 BK34NG

Ultramid A3WG6 HX
Ultramid A3WG7 HRX

Ultramid Balance
Blend PA6 + PA6.10
Blend PA66 + PA6.10

PPA – Ultramid
Advanced

Resistência Química



3- Suporte BASF



Prop. Eléctricas

- Ultramid A 218 CV10
- Ultramid B3PG6
- Ultramid A3WC4

Prop. Impacto

- Ultramid B3Z
- Ultramid A3Z
- Ultramid A238 J1
- Ultramid A738 MX30

Prop. Antichama

- Ultramid A3X2G5
- Ultramid B3UGM210
- Ultramid TKR 4340 G6
- Ultramid A60G1V30

Prop. Alta fluidez

- Ultramid B3WG7 HSP
- Ultramid A3WG7 HP
- Ultramid A3EG7 HSP

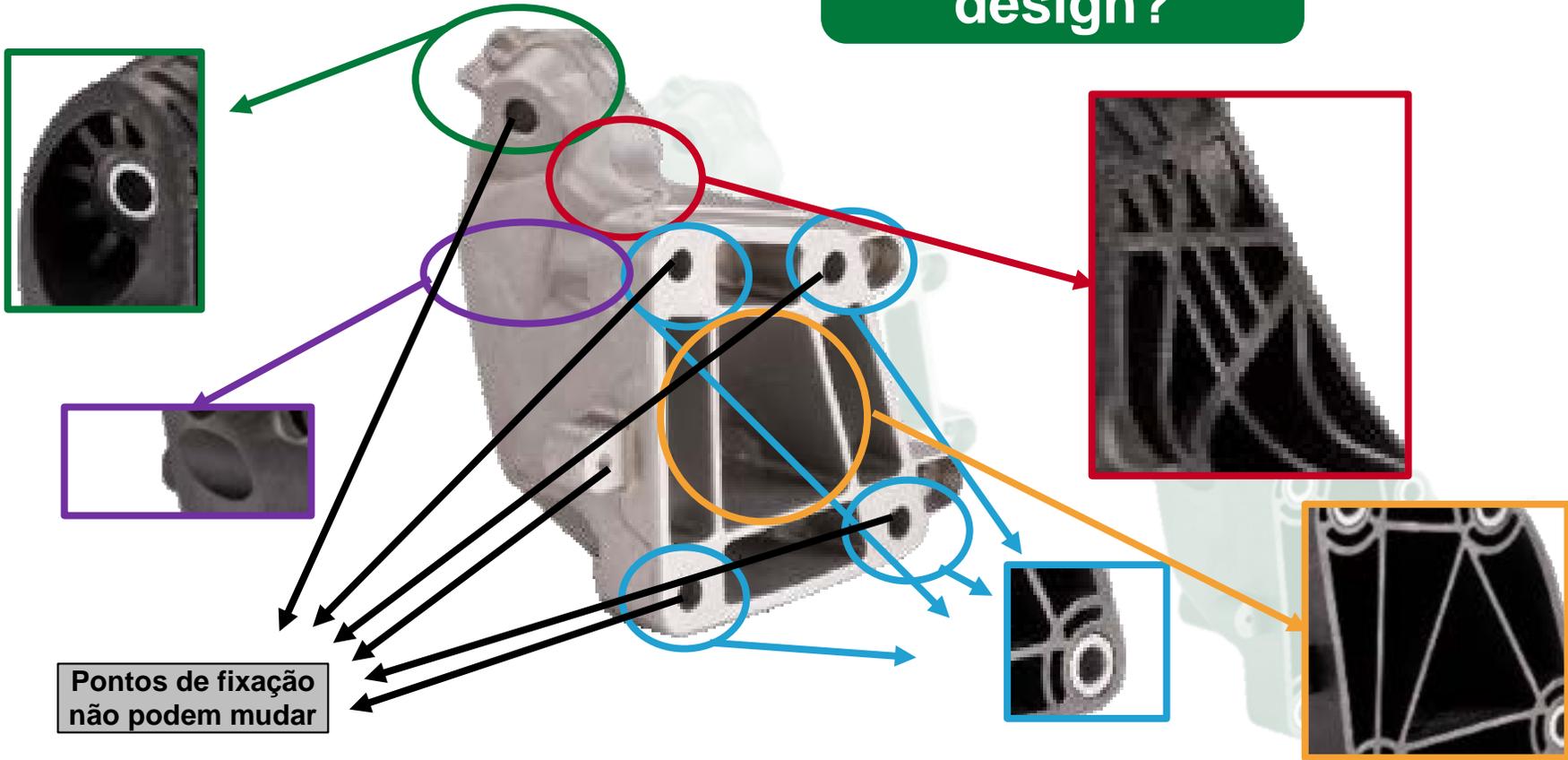
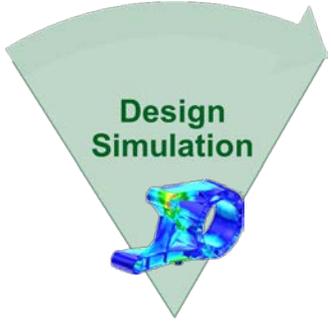
- UV Resistance
- Food contact
- Fricção
- Water contact
- Gas injection (GIT)
- Water injection (WIT)
- Laser sensitive (LS)
- Laser transparente (LT)
- -Etc...

Propriedades Especiais

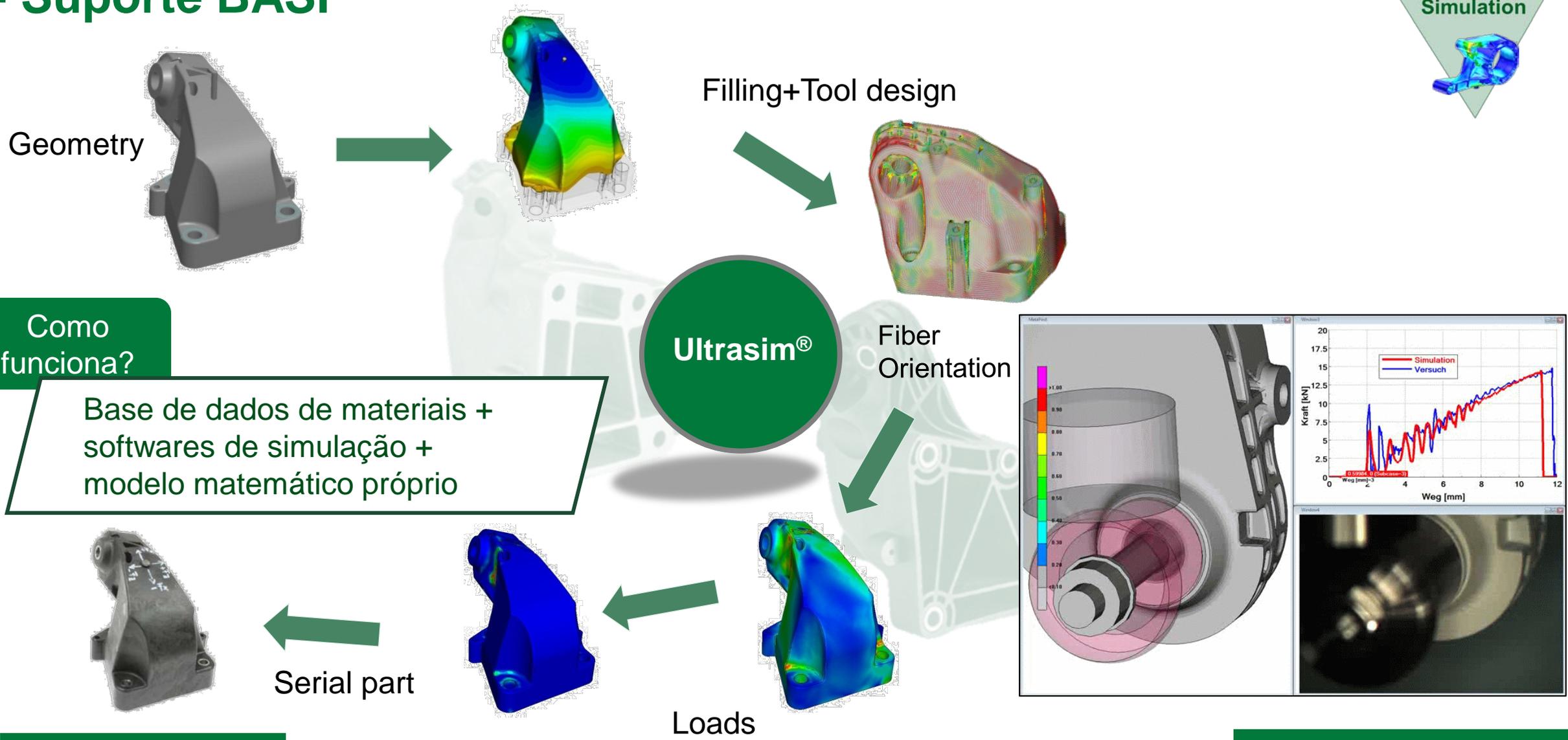


3- Suporte BASF

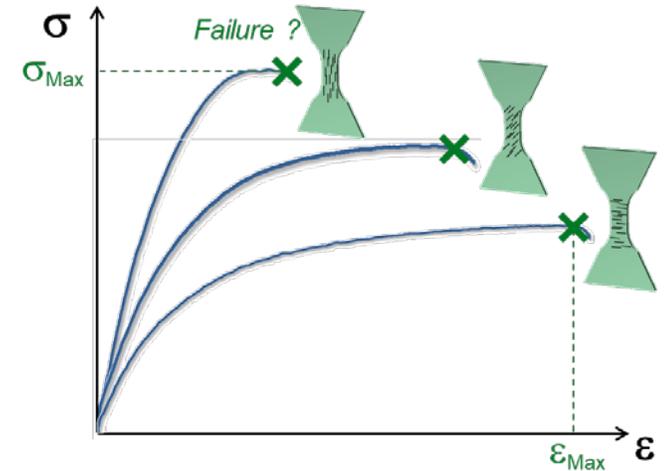
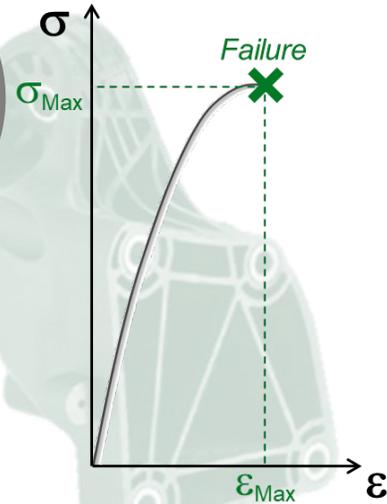
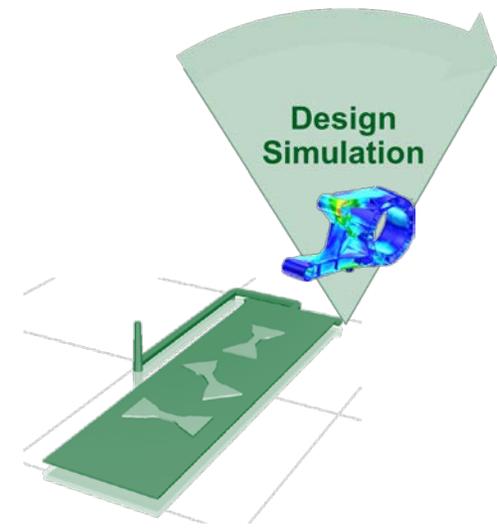
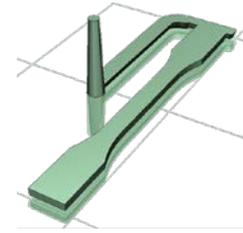
O que muda no design?



3- Suporte BASF



3- Suporte BASF



Porque é diferente?

Input de dados altamente precisa e modelos matemáticos para simular situações adversas não encontrado no mercado

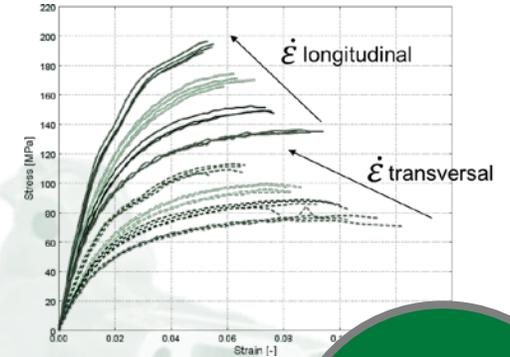
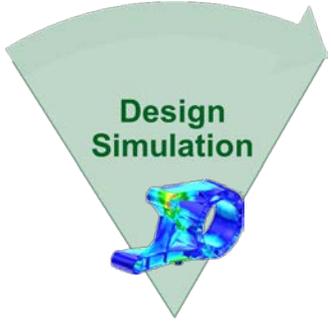
3- Suporte BASF

Orientação

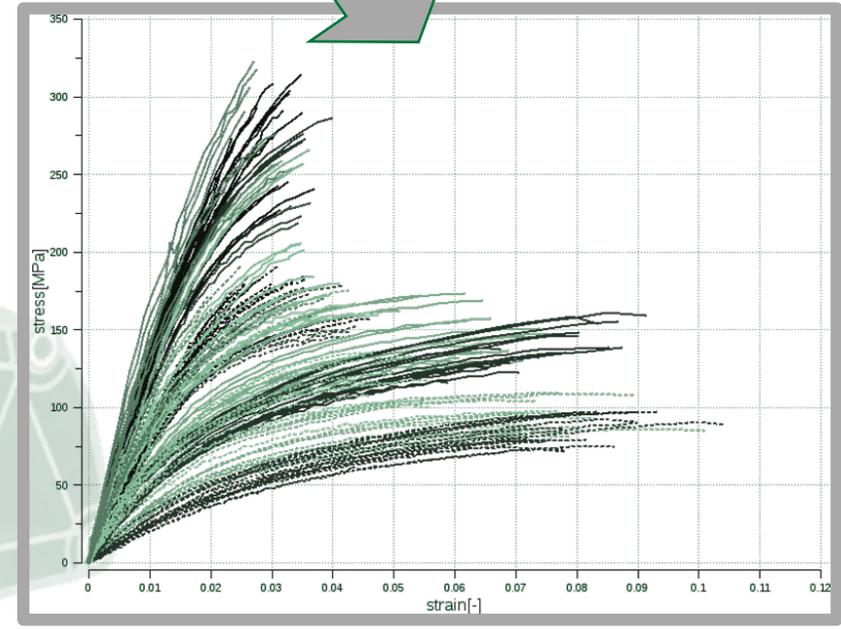
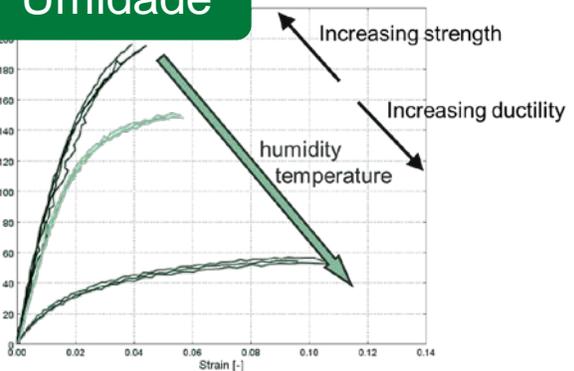
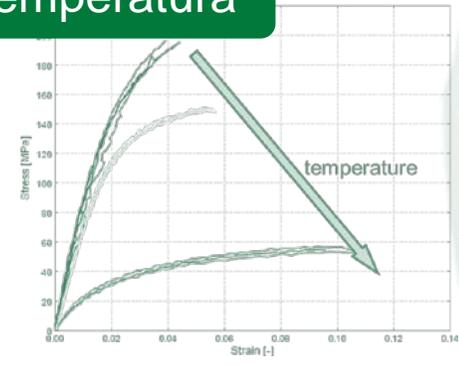
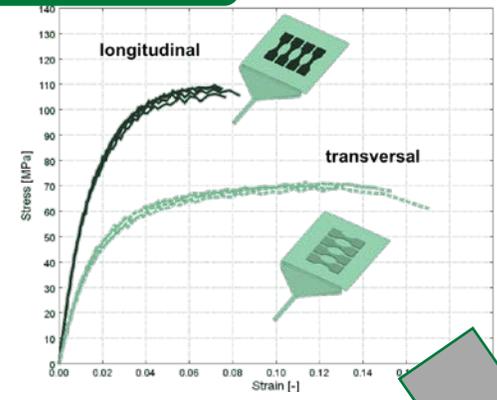
Vel.

Temperatura

Umidade



Strainrate
100 1/s
10 1/s
1 1/s
0.1 1/s



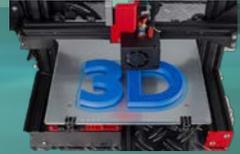
Porque é diferente?

Input de dados altamente precisa e modelos matemáticos para simular situações adversas não encontrado no mercado

Powder Bed Fusion

Filaments for Fused Filament Fabrication

3D
Materials



Powder

PA6
PA6 MF
PA6 FR
PA6 LM
PP
TPU
PA11
PA11 GB
PA11 CF
PA11 ESD

Filaments

PLA
ABS
TPE
HIPS
ASA
PA
PACF
PAHT CF
PET CF
PP GF
TPU
TPE
PSU
BVOH

Photopolymers

Ultracur Tough
Ultracur Rigid
Ultracur Flexible
Ultracur low viscosity

Metal Filaments

Ultrafuse 316L

Liquid Fo
Systems (Phot

BASF
We create chemistry

BASF
We create chemistry

3- Suporte BASF





We create chemistry