

INVISIBLE

INDEPENDENT

INVINCIBLE

INCREDIBLE

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EVONIK
INDUSTRIES

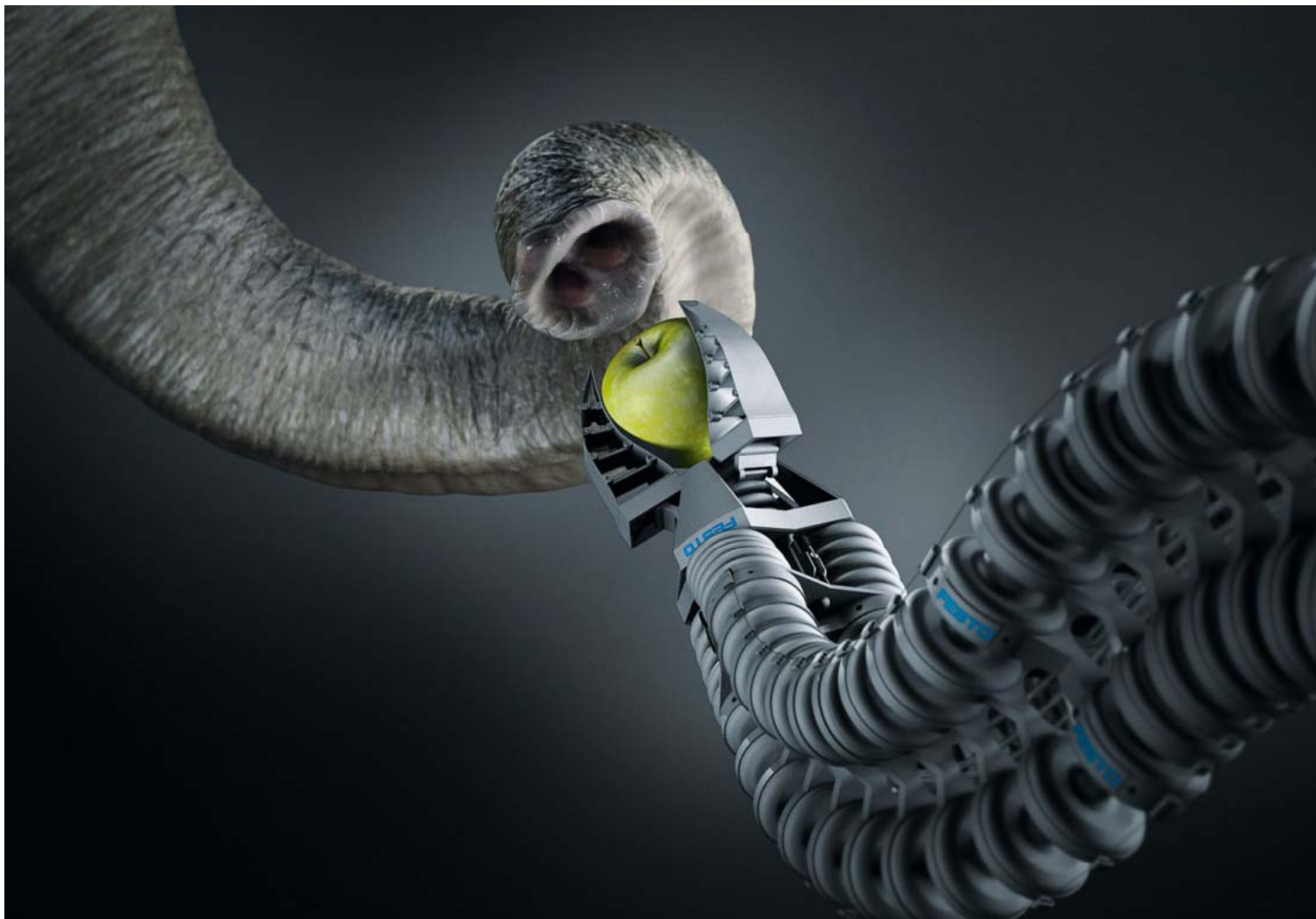
INVISIBLE



Bottleopener:

**The invisible fixed
touch between
plastic and metal**

INDEPENDENT



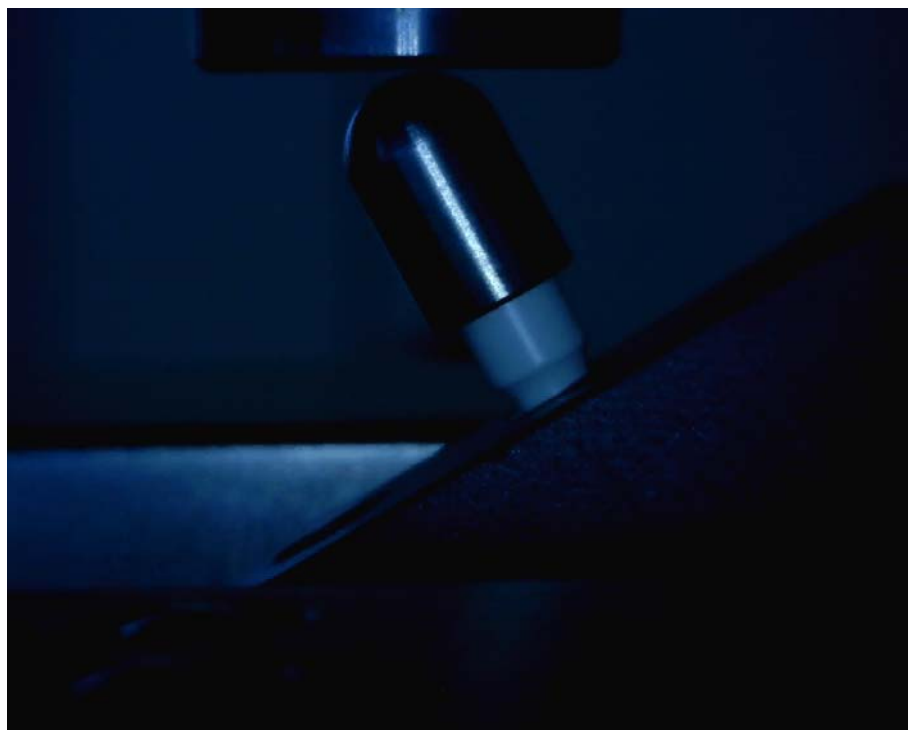
Parts:

Independent
of any
production
limits

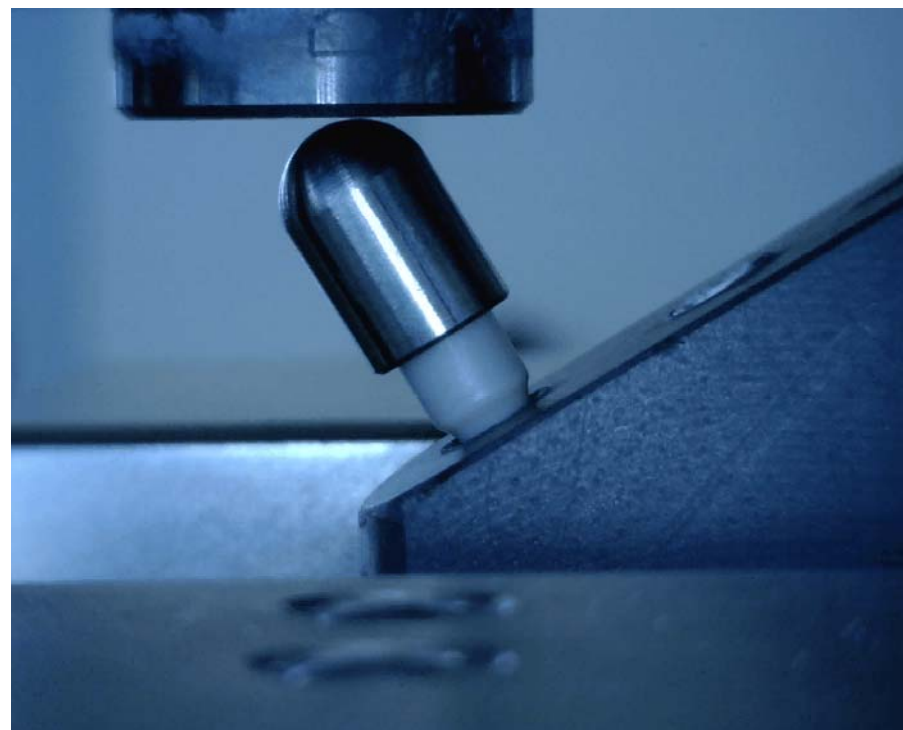
INVINCIBLE



NORMAL



INVINCIBLE



INCREDIBLE



INCREDIBLE



CREATIVE



INVISIBLE

INDEPENDENT

INVINCIBLE

INCREDIBLE

.....by Chemistry

We Are a



RAW MATERIAL PRODUCER

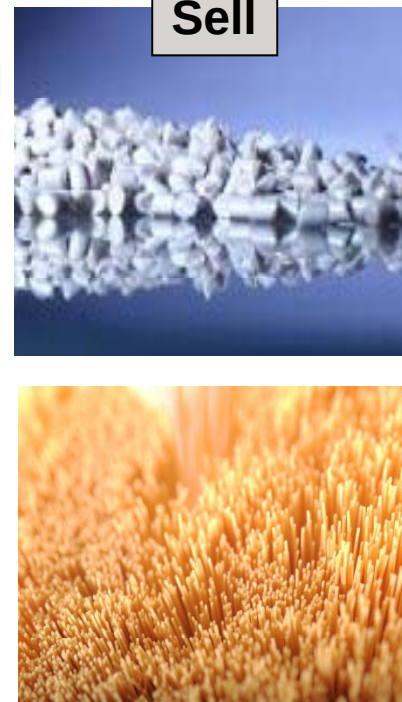
Develop



Produce



Sell

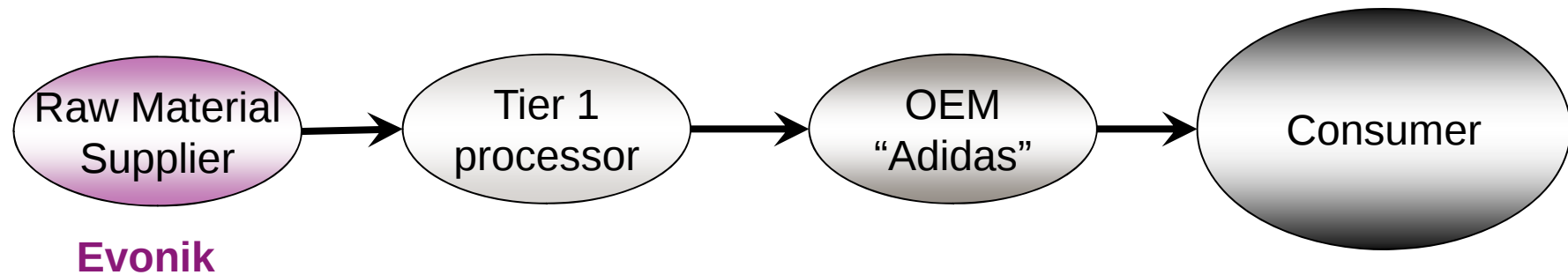


YOU Are

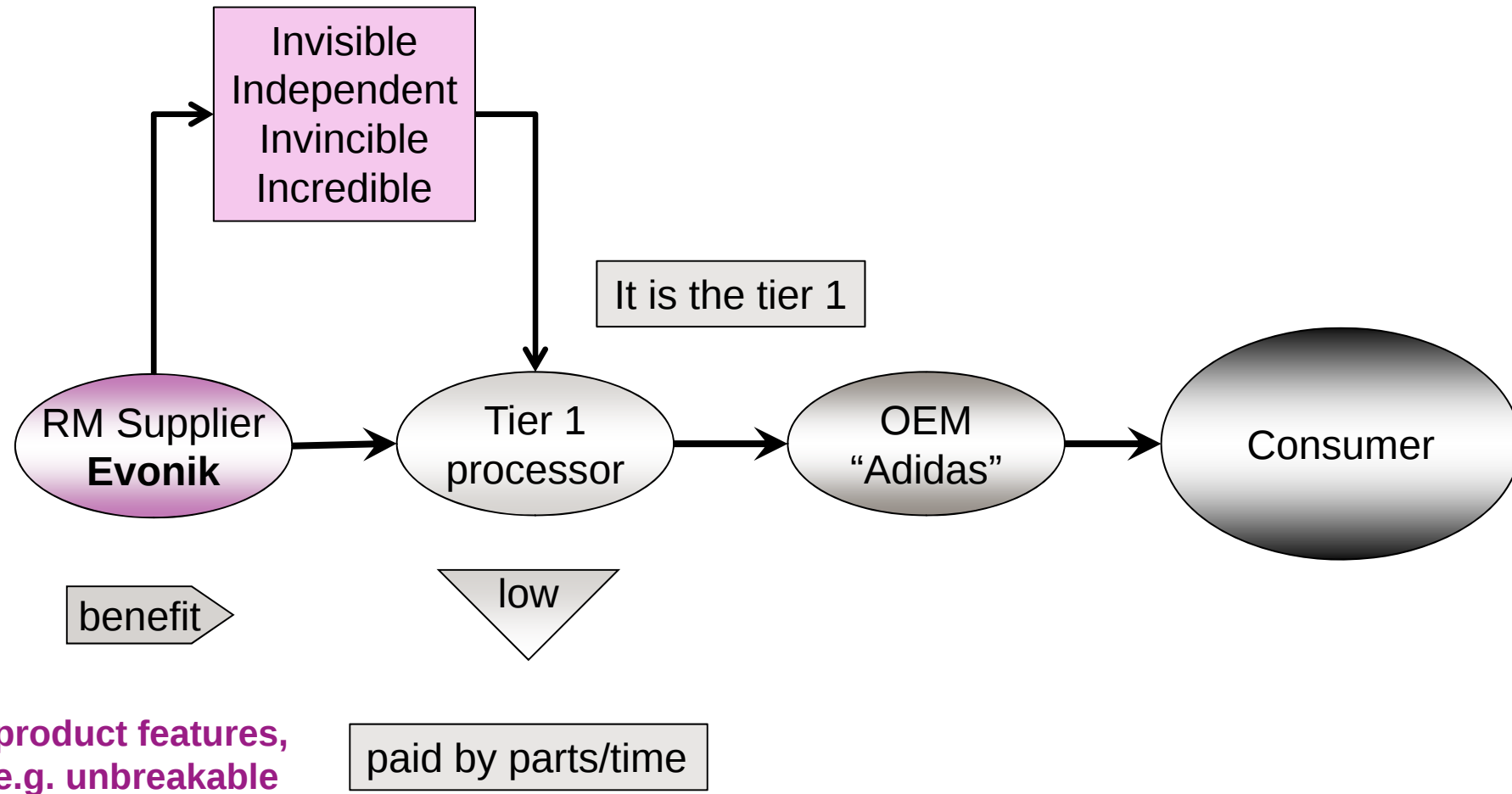
INDUSTRIAL DESIGNERS



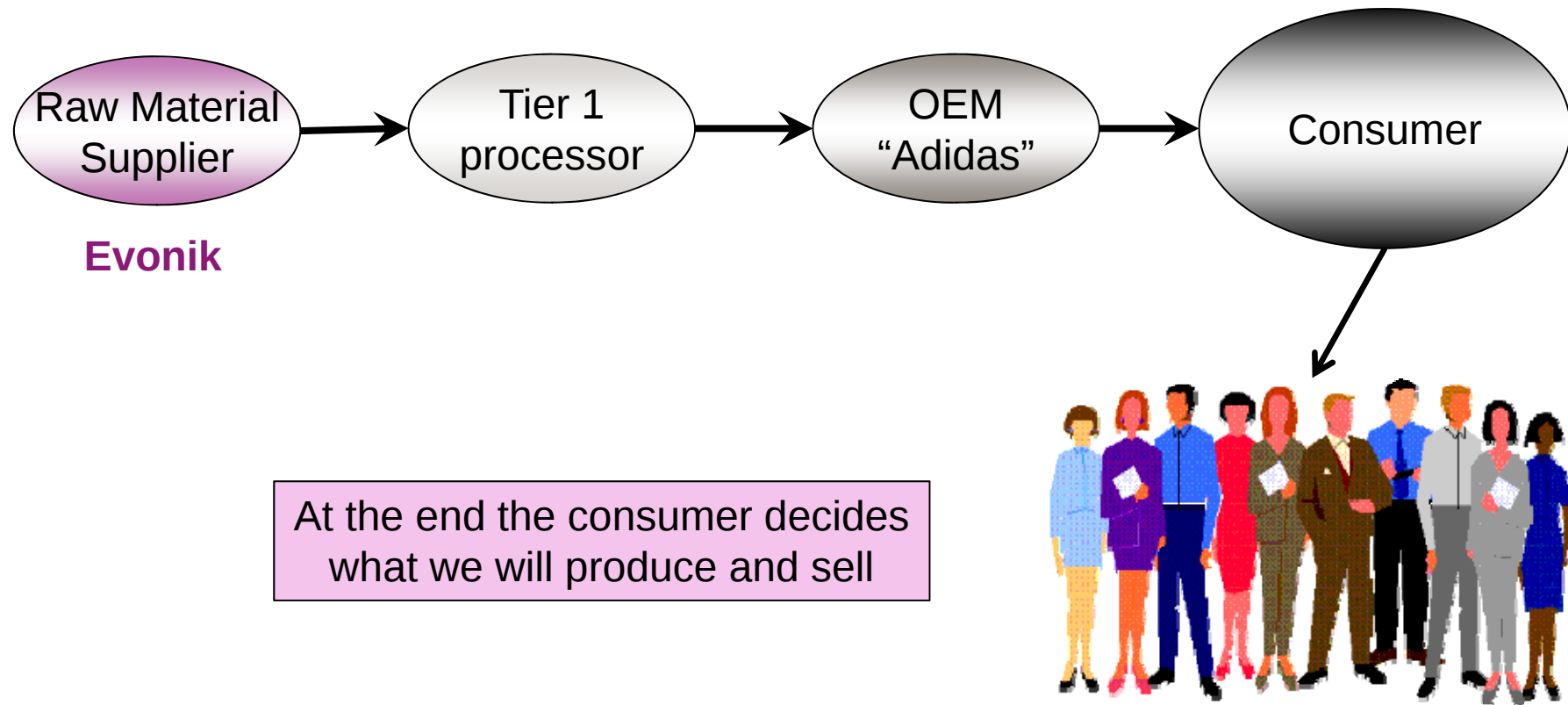
THE VALUE CHAIN



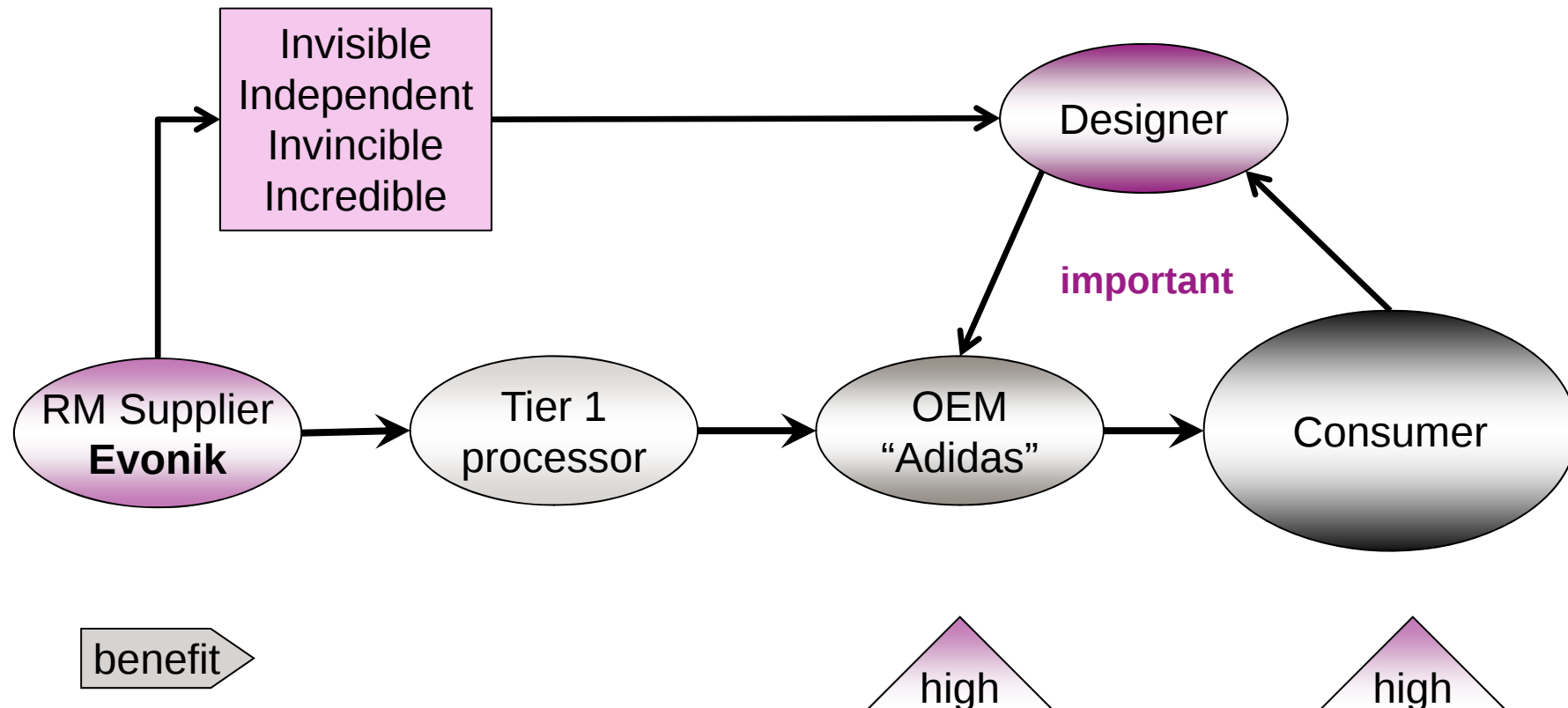
The Raw Material Supplier's Customer



But who decides ?

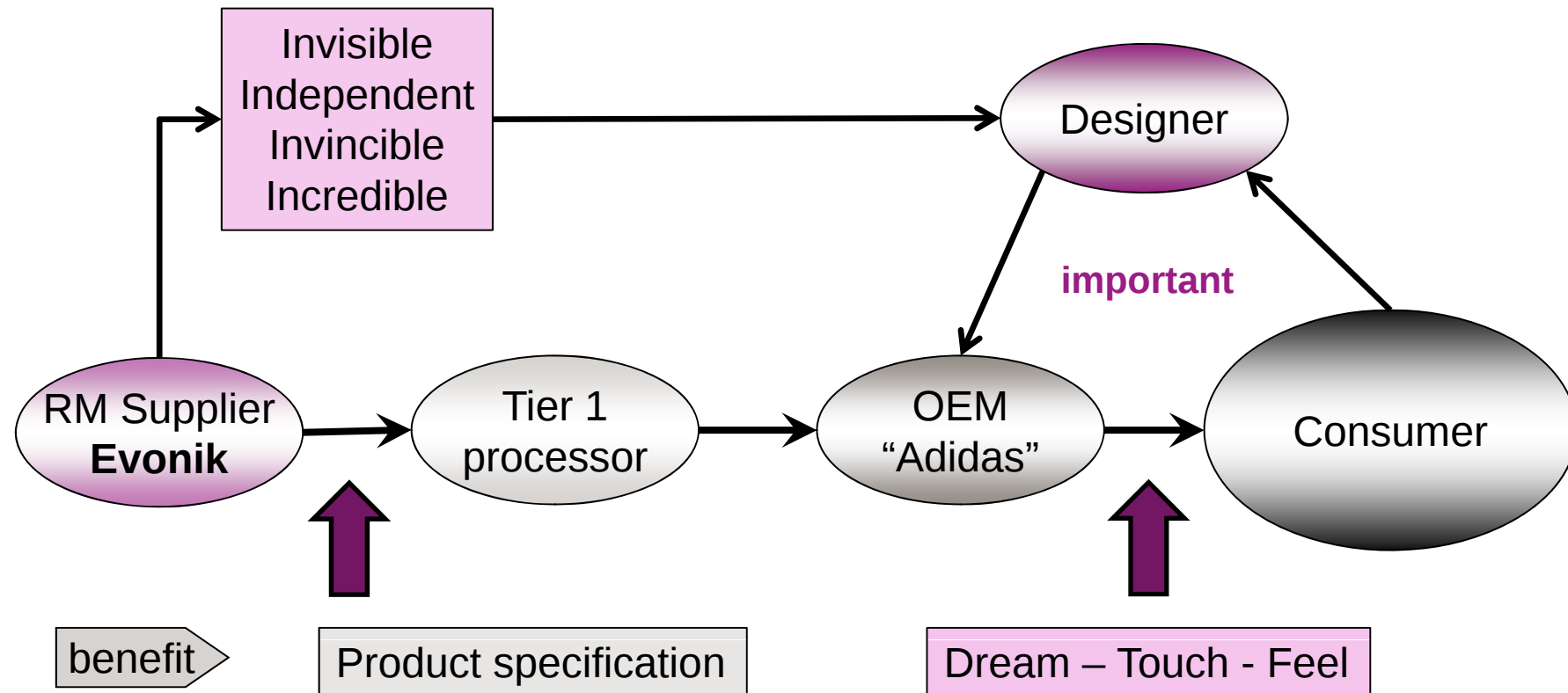


THE VALUE FOR THE MARKET



product features,
e.g. unbreakable

THE APPROACH



product features,
e.g. unbreakable

Specification for the Tire 1



Important Properties of VESTAMID® CW1388 and existing products

Properties		Test method	Unit	CW1388	X7293	X7070	CW1120
Density	23° C	ISO 1183	g/cm ³	1.02	1.02	1.02	1.03
Tensile test		ISO 527-1					
Stress at yield		ISO 527-2	MPa	26	27	27	28
Strain at yield			%	38	32	35	35
Stress at break			MPa	39	38	38	36
Strain at break			%	>180	>200	>200	>150
Tensile modulus		ISO 527-1 ISO 527-2	MPa	405	400	370	410
CHARPY impact strength		ISO 179/1eU					
23° C			kJ/m ²	N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
-30° C			kJ/m ²	N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
CHARPY notched impact strength		ISO 179/1eA					
23° C			kJ/m ²	110 P ¹⁾	130 P ¹⁾	140 P ¹⁾	110 P ¹⁾
Impact Strength (tubing 12 × 1.5 mm)		ISO7628-2					
as molded	-40° C	/DIN73378	J	N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
72 h/150 °C	23° C		J	N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
Impact Strength (tubing 6 × 1 mm)		SAE J844					
after 24 h /110 °C	-40° C			N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
2 h in boiling water	-40° C			N ¹⁾	N ¹⁾	N ¹⁾	N ¹⁾
Hoop stress at burst		DIN 53758					
23° C			MPa	23	23	26	23
100° C			MPa	10	10	10	10
Temperature of deflection under load							
Method A	1.8MPa	ISO 75-1	° C	48	45	46	43
Method B	0.45Mpa	ISO 75-2	° C	120	120	120	116

Pigmentation may affect values.

¹⁾

C = Complete break, incl. hinge break H

N = No break

P = Partial break

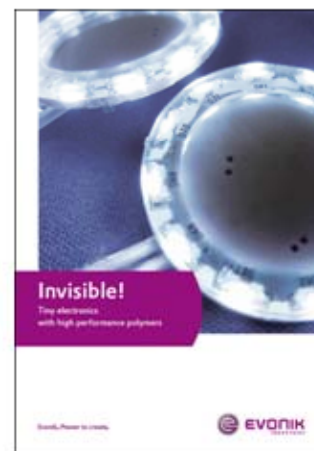
Design Bag and Setcards



Pipes (Gas, Relining, Encasement)



VESTAKEEP® - PEEK



HMM - Composites - Hybrid



Additive Manufacturing - „Festo“

TO CREATE MARKET BENEFIT



Designer



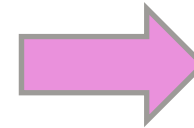
For the real benefit of the market
Designer – OEM's – Material Supplier



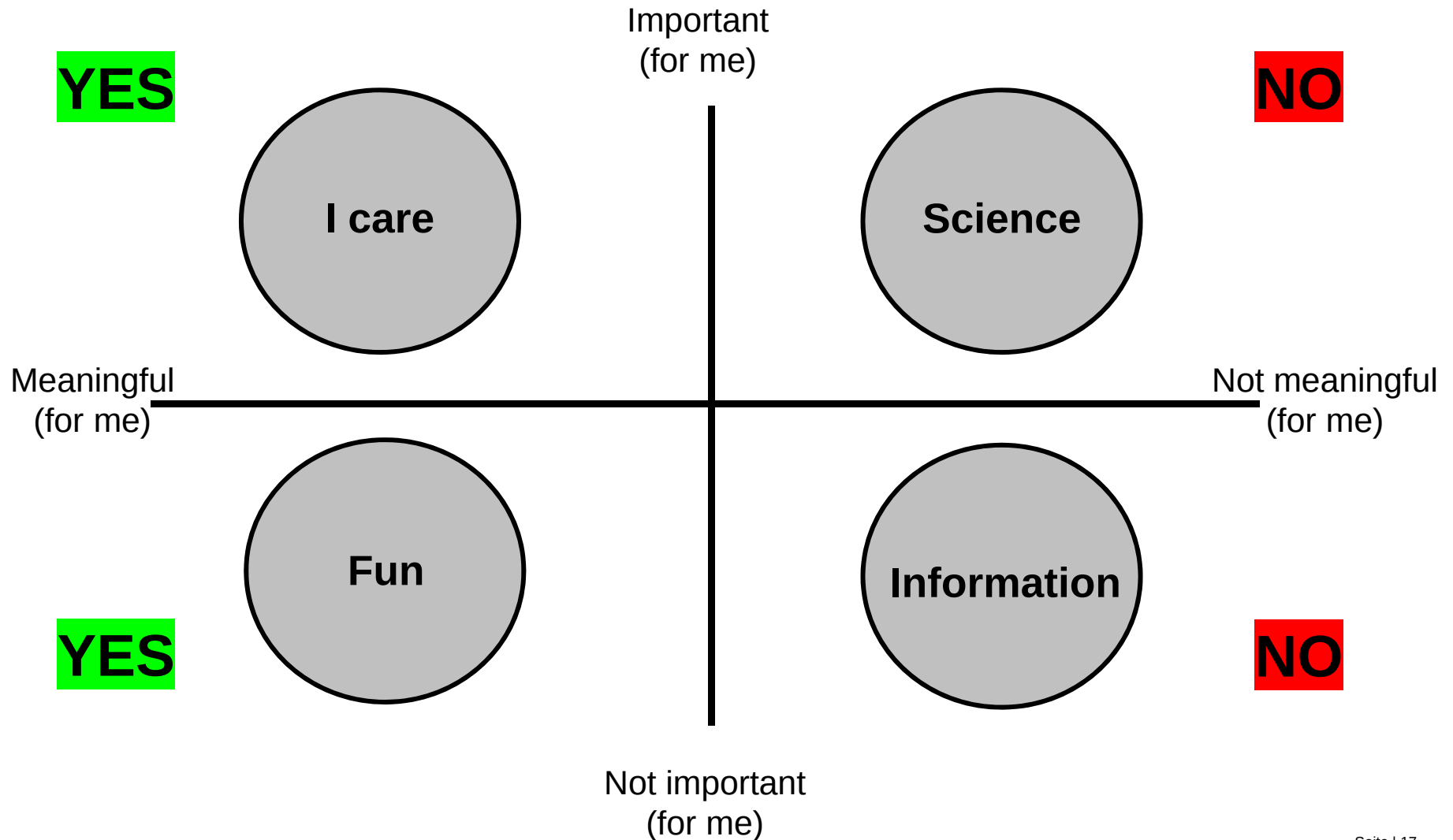
Raw Material



OEM



Where Is The Value.....?



Dream it

Touch it

Make it

INCREDIBLE





EVONIK
INDUSTRIES