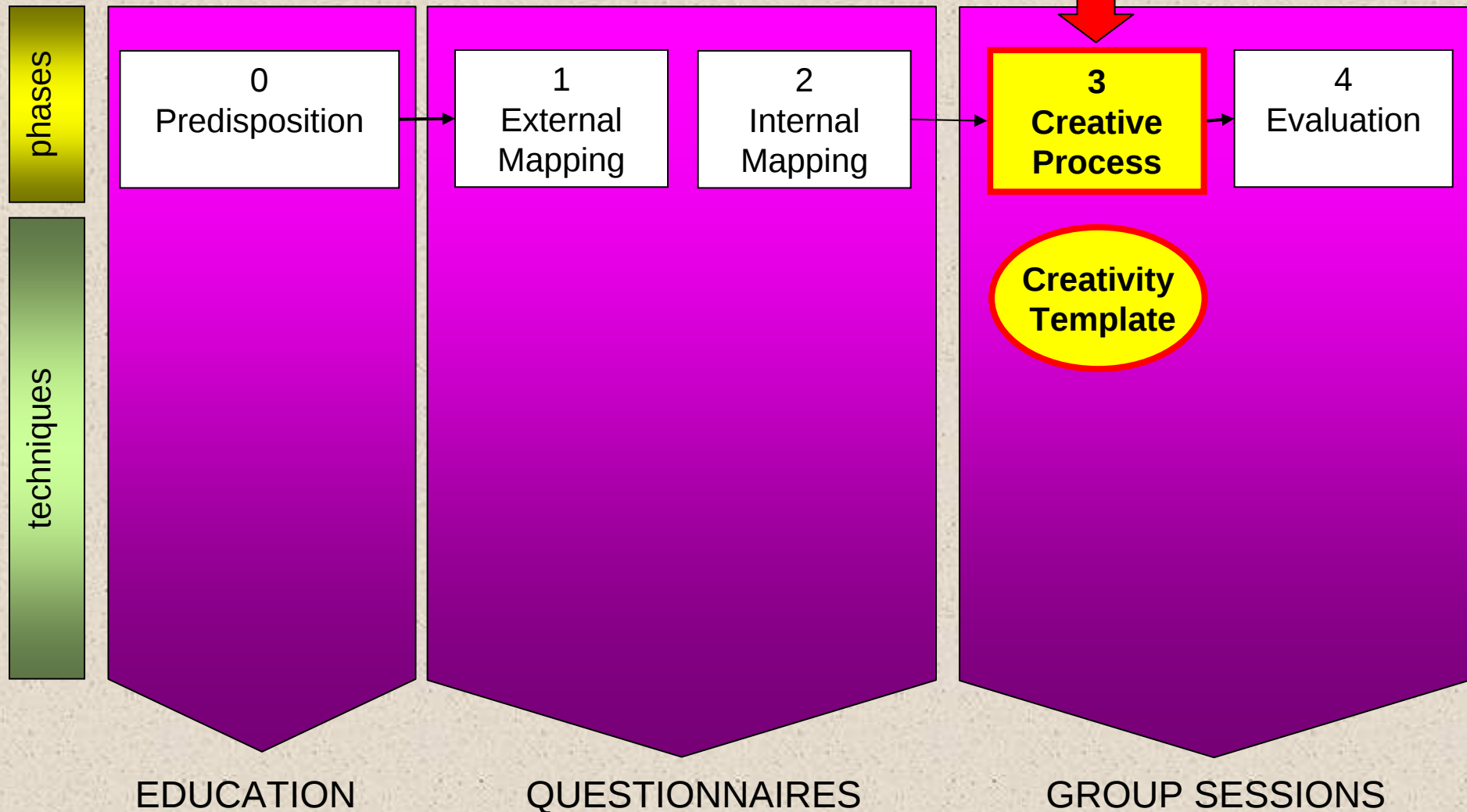


CREATIVITY TEMPLATE

A STRUCTURED APPROACH
TO CREATIVE PROCESS

TOOLS

WE ARE HERE!



AUTHORS OF THIS TECHNIQUE

Published for the first time in 2002

- **Jacob Goldeberg** (Hebrew University Jerusalem)
works for Intel, Motorola, Mastercard,...
- **David Mazursky** (Hebrew University Jerusalem)
world-famous Marketing expert
- **Sorin Solomon** (Hebrew University Jerusalem, Racah Institute)
theoretic physicist

WHAT ARE CREATIVITY TEMPLATES?

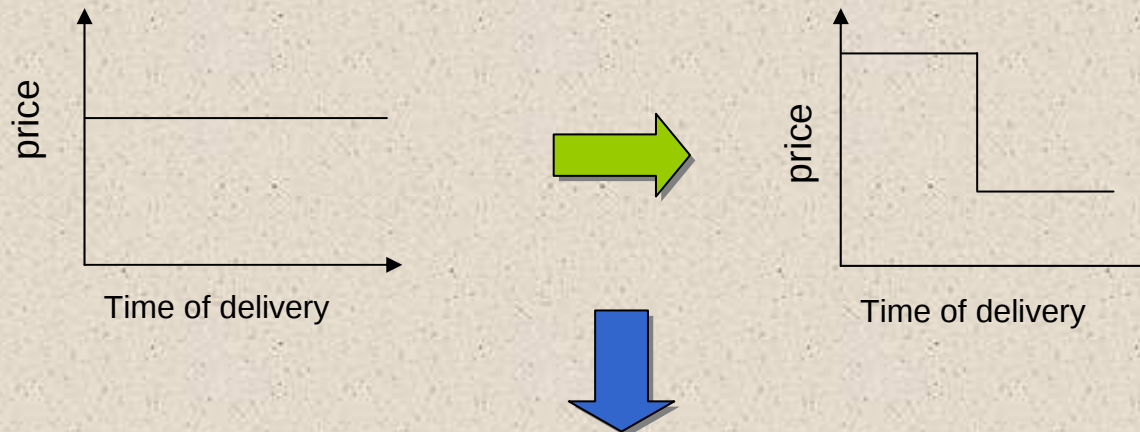
- **4 ideative schemes** for a structured approach to innovation processes
- many new and successful ideas about products or services can be taken back to one of the templates
- a lot of well-known enterprises adopt this approach (e.g. Philips, Ford, Kodak, Coca-Cola, Motorola, exc.)

EXAMPLE 1



Domino's Pizza: leader in home delivery. Its success derives from **reducing price** in case **time of delivery** is **over half an hour**.

Innovative element: price of pizza is **no longer constant**, but depends on delivery (step function).



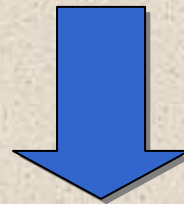
New relation between price and a characteristic of the service

EXAMPLE 2



Wirefree (1999) : mobile phone **loudspeakers** substituted by car loudspeakers

Advantages: **sound quality** (which depends on loudspeakers dimensions) **increases** significantly without any increment of cost



Substituting a product component with another available resource

Creativity Templates

1.

Attribute

Attribute dependence template

2.

Replacement

Replacement template

3.

Displacement

Displacement template

1. Attribute dependency template

1.

Attribute

2.

Replacement

3.

Displacement

Basic principles

Basic
principles

Hypothetical case

Hypothetical
case

Forecasting matrix

Forecasting
matrix

Application example

Application
example

BASIC PRINCIPLES

1.

Attribute

2.

Replacement

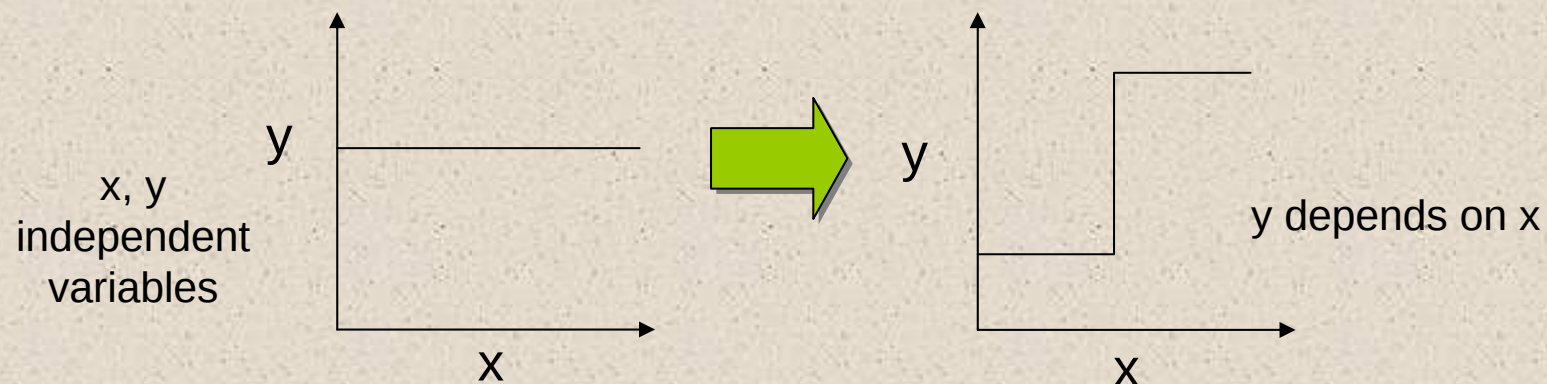
3.

Displacement

identify 2 independent variables
and create a new dependence
between them



the connection can be represented by a step
function



Basic
principles

Hypotetical
case

Forecasting
matrix

Application
example

A HYPOTHETICAL CASE

1.

Attribute

How to compete with Domino's Pizza?



2.

Replacement

Domino's pizza:

Hypotetical competitor

Basic
principles

3.

Displacement

**Successful
element:**

price reduction in case
time of delivery is over
half an hour

**Price as a dependent
variable**

Hypotetical
case



Consequence: The consumer is less
sensitive to delay in
general (bet effect)

**Adding a new dependence
to pizza home delivery**

Forecasting
matrix

Application
example

VARIABLES FOR A NEW DEPENDENCY

1.

Attribute

2.

Replacement

3.

Displacement

Variable	Is it possible to add a new dependence by using this variable?	Motivation
pizza dimensions	no	price already depends on pizza dimensions
number of extras	no	price already depends on number of extra
adding a drink	no	this is a component and not a variable
temperature	yes	very important and measurable variable
past orders	perhaps	interesting variable; but there is often a dependency already between price and customer's habits

Basic principles

Hypotetical case

Forecasting matrix

Application example

IS YOUR PIZZA STILL HOT AND TASTY???

1.

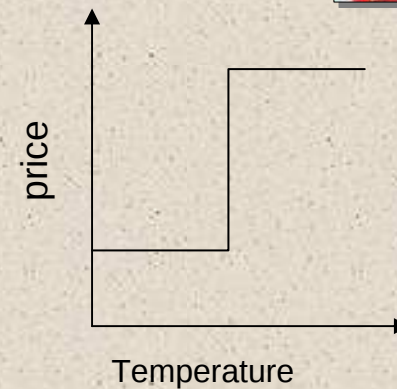
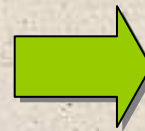
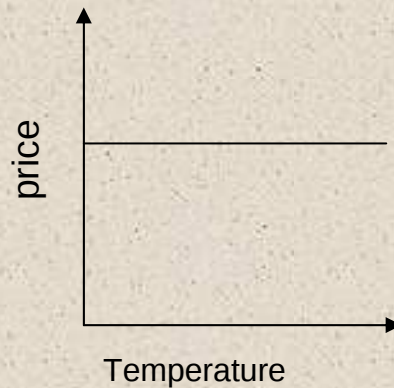
Attribute

Pizza is full price if it is over a certain temperature



2.

Replacement



3.

Displacement

Marketing message:

pizza taste depends on its temperature and not on time delivery

Basic
principles

Hypotetical
case

Forecasting
matrix

Application
example

LOOKING FOR NEW DEPENDENCIES

1.

Attribute

☐ How can we find Attribute dependence variables?

2.

Replacement

☐ How can we evaluate the feasibility and profitability of a new idea?

3.

Displacement



... by using the **Forecasting Matrix**

Basic
principlesHypothetical
caseForecasting
matrixApplication
example

HOW CAN WE IDENTIFY RELEVANT VARIABLES AND SEARCH FOR NEW DEPENDENCIES?

1.

Attribute

2.

Replacement

3.

Displacement

variable classification

Internal: under producer's control
(pizza price, pizza temperature, car colour,...)

External: in contact with product but
not under producer's control
(environment temperature,...)

Basic
principlesHypotetical
caseForecasting
matrixApplication
example

FORECASTING MATRIX

1. Attribute
2. Replacement
3. Displacement
- Control

		Internal Variables				
		Price	Temperature	...	...	...
Internal Var.	Price					
	Temperature	0				
	...	0	0			
	...	0	1	0		
External Var.	...	0	0	1	0	
	Weather	0	0	0	0	0
	Traffic	0	0	0	0	0
	...	1	0	1	0	0
	...	0	1	0	0	0

Basic principles

Hypotetical case

Forecasting matrix

Application example

0 = not yet existent dependencies 1 = already existent dependencies

1.

Attribute

2.

Replacement

3.

Displacement

An application example: DERBI

Basic
principles

Hypotetical
case

Forecasting
matrix

Application
example

INTERNAL/EXTERNAL VARIABLES MATRIX

1. Attribute	INTERNAL AND EXTERNAL VARIABLES		INTERNAL VARIABLES								
			Price	Line	Wheel dimension	Dimension /Weight	Power	Colour	Feeding type		Decorations
2. Replacement	INTERNAL VARIABLES	Price	X	0	0	1	1	0	1	1	Basic principles
		Line	0	X	1	1	0	0	0	0	
3. Displacement		Wheel dimension	0	1	X	1	0	0	0	0	Hypotetel case
		Dimension/Weight	1	1	1	X	1	0	1	0	
Control		Power	1	0	0	1	X	0	0	0	Forecasting matrix
		Colour	0	0	0	0	0	X	0	1	
		Feeding type	1	0	0	1	0	0	X	0	
		Decorations	1	0	0	0	0	1	0	X	
EXTERNAL VARIABLES	External temperature	0	0	0	0	0	0	0	0	Application example	
	Visibility	0	0	0	0	0	0	0	0		
	Driver's age	0	0	0	0	0	1	0	1		

External Variable VISIBILITY: LOOKING FOR DEPENDENCIES



1.

Attribute

2.

Replacement

3.

Displacement

VARIABLE	IS IT POSSIBLE TO ADD A NEW DEPENDENCE BY USING THIS VARIABLE?	MOTIVATION
Colour/Decoration	YES	Make driving safer in case of bad weather
Wheel dimension	YES	Not interesting variable

Basic
principles

Hypotetical
case

Forecasting
matrix

Application
example

EXAMPLE: COLOUR/VISIBILITY

A good idea could be to use a special paint or lighting devices in order to improve scooter visibility in adverse conditions.

INTERNAL/EXTERNAL VARIABLES MATRIX

1. Attribute	EXTERNAL VARIABLES		INTERNAL VARIABLES									
			Price	Line	Wheel dimension	Dimension /Weight	Power	Colour	Feeding type	Decorations		
2. Replacement	INTERNAL VARIABLES	Price	X	0	0	1	1	0	1	1	Basic principles	
3. Displacement		Line	0	X	1	1	0	0	0	0		Hypotetical case
		Wheel dimension	0	1	X	1	0	0	0	0		
		Dimension/Weight	1	1	1	X	1	0	1	0		
		Power	1	0	0	1	X	0	0	0	Forecasting matrix	
		Colour	0	0	0	0	0	X	0	1		
Feeding type		1	0	0	1	0	0	X	0			
		Decorations	1	0	0	0	0	1	0	X	Application example	
EXTERNAL L VARIABLES	External temperature	0	0	0	0	0	0	0	0			
	Visibility	0	0	0	0	0	0	0	0			
	Driver's age	0	0	0	0	0	1	0	1			

External Variable TEMPERATURE: LOOKING FOR DEPENDENCIES



1. Attribute	VARIABLE	IS IT POSSIBLE TO ADD A NEW DEPENDENCE BY USING THIS VARIABLE?	MOTIVATION	Basic principles
2. Replacement	Line	YES	Make the trip more comfortable	Hypotetical case
3. Displacement	Feeding type	YES	Reduce polluting emissions in summer	Forecasting matrix

EXAMPLE: LINE / EXTERNAL TEMPERATURE

possibility to add a mobile dome that comes out from the frame
and shields the driver in case of bad weather

Application
example

INTERNAL/EXTERNAL VARIABLES MATRIX

1. Attribute	EXTERNAL VARIABLES		INTERNAL VARIABLES								
			Price	Line	Wheel dimension	Dimension /Weight	Power	Colour	Feeding type	Decorations	
2. Replacement	INTERNAL AND EXTERNAL VARIABLES										
3. Displacement	INTERNAL VARIABLES	Price	X	0	0	1	1	0	1	1	Basic principles
		Line	0	X	1	1	0	0	0	0	
Wheel dimension		0	1	X	1	0	0	0	0	Hypotetical case	
Dimension/Weight		1	1	1	X	1	0	1	0		
Power		1	0	0	1	X	0	0	0	Forecasting matrix	
Colour		0	0	0	0	0	X	0	1		
Feeding type		1	0	0	1	0	0	X	0		
Decorations		1	0	0	0	0	1	0	X	Application example	
EXTERNAL L VARIABLES	External temperature	0	0	0	0	0	0	0	0		
	Visibility	0	0	0	0	0	0	0	0		
	Driver's age	0	0	0	0	0	1	0	1		

Internal Variable VISIBILITY: LOOKING FOR DEPENDENCIES



1.
Attribute

2.
Replacement

3.
Displacement

VARIABLE	IS IT POSSIBLE TO ADD A NEW DEPENDENCE BY USING THIS VARIABLE?	MOTIVATION
Power	NO	Price is already depending on power and engine
Driver's age	YES	We push sales of this model among very young customers

Basic
principles

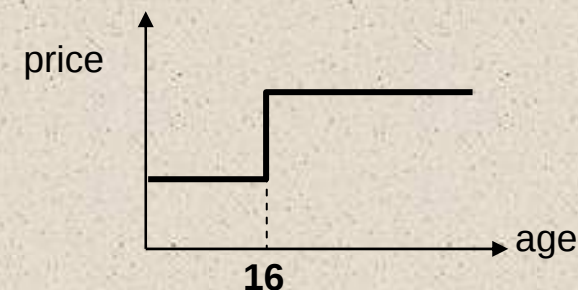
Hypotetical
case

Forecasting
matrix

Application
example

EXAMPLE: AGE/PRICE

we want to link the scooter's price with
the driver's age in order to attract a
younger market target



2. Replacement template

1. Attribute	<i>Basic principles</i>	Basic principles
2. Replacement	<i>Definitions</i>	Definitions
3. Displacement	<i>Operative prescriptions</i>	Operative Prescriptions
	<i>Case study</i>	Case study

BASIC PRINCIPLE

1.

Attribute

Substituting a resource or a component existing in the system or in its immediate neighbourhood to satisfy a specific function

Basic principles

2.

Replacement

New component characteristics:

- available in the local context
- fulfil required function

Definitions

3.

Displacement

Operative Prescriptions

Case study

DEFINITIONS

1.

Attribute

☐ **Component:** autonomous part or subsystem (static object) both internal and external

2.

Replacement

☐ **Link between two components:**

1) Controlling component

2) Controlled component

3.

Displacement

☐ **Product configuration:** the whole links of the product

Basic principles

Definitions

Operative Prescriptions

Case study

OPERATIVE PRESCRIPTIONS

Basic
principles

Definitions

Operative
PrescriptionsCase
study

1.

Attribute

1. List **components**

2.

Replacement

2. Build **product configuration**

3.

Displacement

- 3. Choose an essential component and **remove** it from the configuration without removing its function
- 4. List external components physically or functionally **similar** to the excluded one
- 5. Connect each external component to the function lacking in component: **new configuration**
- 6. Look for a **new market advantage**

CASE STUDY: A CHAIR (1/4)

1.

Attribute

1a. Internal components: legs, seat, back

1b. External components: floor, wall, user

2.

Replacement

Physical model

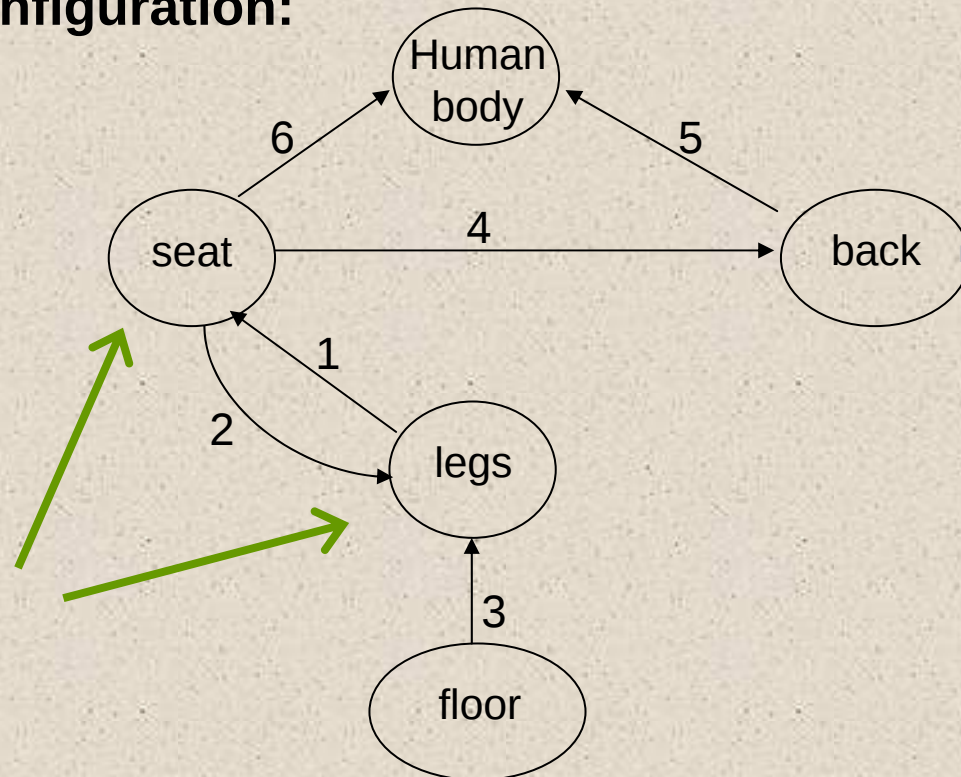


3.

Displacement

Essential components

2. Chair configuration:



Basic
principles

Definitions

Operative
Prescriptions

Case
study

CASE STUDY: A CHAIR (2/4)

1.

Attribute

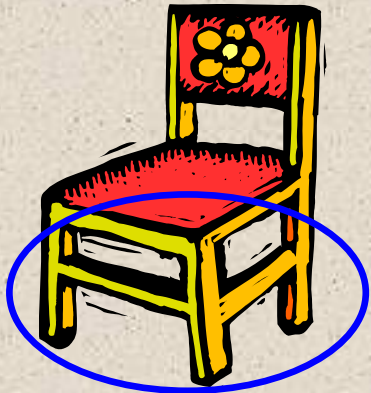
2.

Replacement

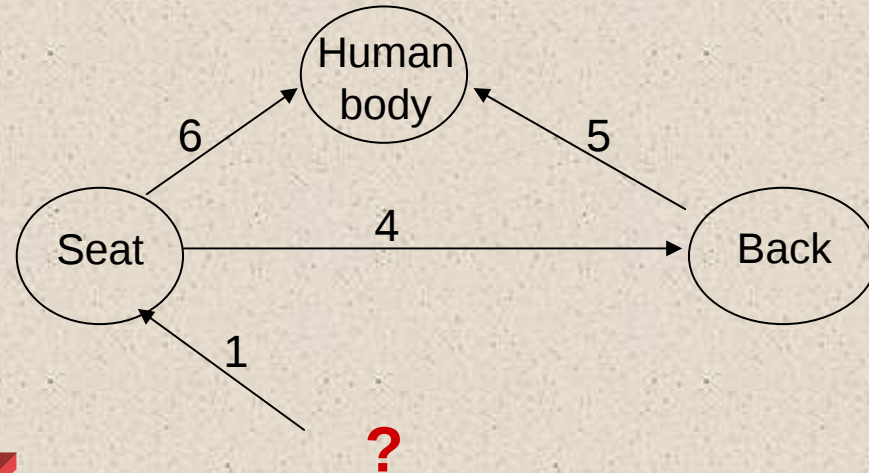
3.

Displacement

3. Component **elimination** (without removing its function)



Physical model



Intermediate chair configuration

Basic principles

Definitions

Operative Prescriptions

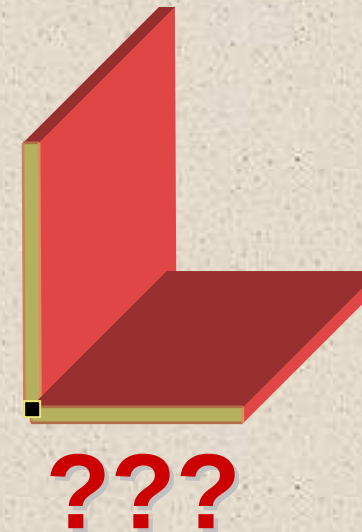
Case study

CASE STUDY: A CHAIR (3/4)

4. Individuation of a component **similar** to the missing one

Criteria:

- external
- In contact with product
- Physically or functionally similar to missing component



Possible solutions: wall, table, carpet, user, floor

Substitutive component: table (design and functional similarity)

Basic principles

Definitions

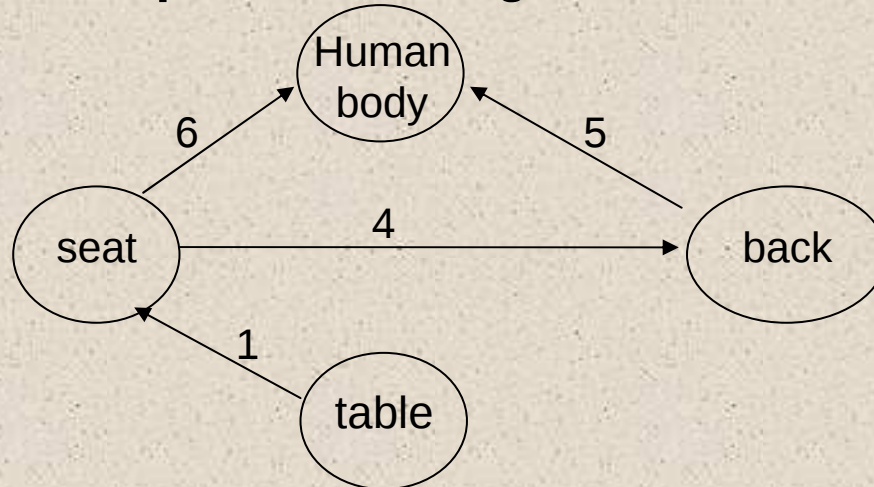
Operative Prescriptions

Case study

CASE STUDY: A CHAIR (4/4)

5. New product configuration

1.
Attribute
2.
Replacement
3.
Displacement



(a)
New chair configuration



(b)
Physical model

Basic
principles

Definitions

Operative
Prescriptions

Case
study

6. New Advantages:

- Children may sit at the appropriate height in relation to the table
- Easier to transport and to clean

3. Displacement template

1.

Attribute

*Basic principles*Basic
principles

2.

Replacement

*Operative prescriptions*Operative
Prescriptions

3.

Displacement

Example

Example

BASIC PRINCIPLE

1.

Attribute

It is a variant of the previous template.

Basic
principles

2.

Replacement

It excludes an intrinsic component and its functions
from product configuration

Operative
Prescriptions

3.

Displacement

Example

OPERATIVE PRESCRIPTIONS

1.

Attribute

1. List **internal and external components**

2.

Replacement

2. Build **product configuration**

3. Choose an essential component and **remove** it from the configuration **together with its function**

3.

Displacement

4. Look for a **new market advantage**

Basic
principlesOperative
Prescriptions

Example

EXAMPLE: A CHAIR

1.

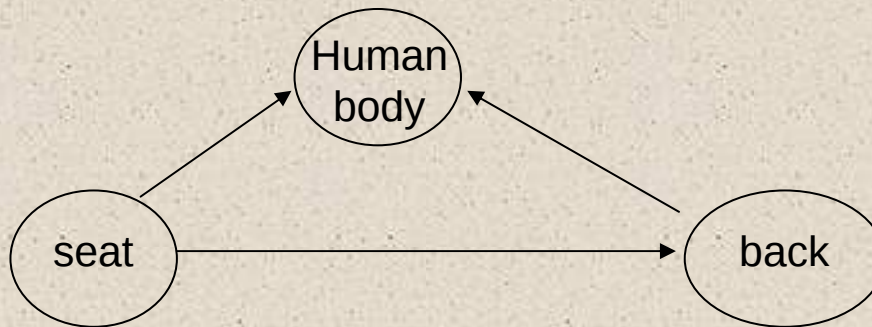
Attribute

2.

Replacement

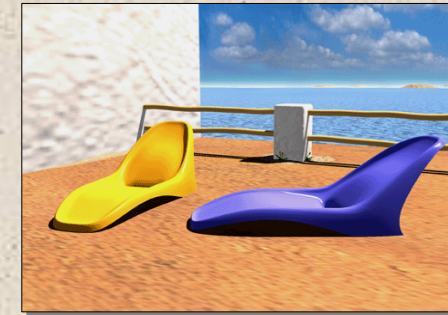
3.

Displacement



(a)

New chair configuration



(b)

Physical model of the new chair

Basic
principles

Operative
Prescriptions

Chair's leg function is not satisfied and the chair is on the floor

New Advantages: high stability (very useful on the beach)

Example

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