CREATIVITY TEMPLATE
A STRUCTURED APPROACH FOR CREATIVE PROCESS

Creativity Template
- invented by J. Goldenberg and D. Mazursky (2002)
- 4 new ideative schemes for a structured approach to innovation processes
- fundamental principle: products and services have inside the evolution of consumers’ desires and needs
- 70% of 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.)

Attribute dependency template (I)
Basic principle:
identify 2 independent variables and create a new dependency between them
The connection can be represented by a step function.

Attribute dependency template (II)
Variable: element subjected to a measurable change
Measure:
- Exact (quantitative)
- Categoric (qualitative)
Ex.: | Components | Variables |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>colour, vision clearness</td>
</tr>
<tr>
<td>chair legs</td>
<td>length, colour</td>
</tr>
<tr>
<td>screws</td>
<td>number, length, thickness</td>
</tr>
<tr>
<td>hat</td>
<td>measure, colour, water proof</td>
</tr>
<tr>
<td>time</td>
<td></td>
</tr>
</tbody>
</table>
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Attribute dependency template (III)

How to compete with Domino’s Pizza: a hypothetical case

Domino’s:
Successful element:
price reduction in case time of delivery is over half an hour
Consequence:
The consumer is less sensitive to delay in general
Hypothetical competitor strategy:
- Price as dependent variable
- Adding a new dependency to pizza home delivery

Attribute dependency template (IV)

Variables for a new dependency

<table>
<thead>
<tr>
<th>Variable</th>
<th>Is it possible to add a new dependency by using this variable?</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>pizza dimensions</td>
<td>no</td>
<td>price already depends on price dimensions</td>
</tr>
<tr>
<td>number of sakes</td>
<td>no</td>
<td>price already depends on number of sakes</td>
</tr>
<tr>
<td>adding a drink</td>
<td>no</td>
<td>this is a component and not a variable</td>
</tr>
<tr>
<td>temperature</td>
<td>yes</td>
<td>very important and measurable variable</td>
</tr>
<tr>
<td>distance between customer and restaurant</td>
<td>yes</td>
<td>measurable but not very relevant variable</td>
</tr>
<tr>
<td>past orders</td>
<td>perhaps</td>
<td>interesting variable; but it often yet exists a dependency between price and customer’s habits</td>
</tr>
</tbody>
</table>

Attribute dependency template (V)

Is your pizza still hot and tasty???

Pizza is full price if it is over a certain temperature

Marketing message:
pizza taste depends on its temperature and not on time of delivery

Attribute dependency template (VI)

How can we find Attribute dependency variables?
- How can we evaluate the feasibility and profitability of a new idea?

... By using the Forecasting Matrix

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Forecasting matrix (I)

How can we identify relevant variables and research new dependencies?

Classification of variables
- Internal: under producer’s control (pizza price, pizza temperature, car colour, …)
- External: in contact with product but not under producer’s control (environment temperature, …)

Forecasting matrix (II)

- Systematic tool for the analysis of variables dependencies
- Columns: internal variables
- Rows: internal and external variables

Ex.: glasses
1) Internal variables: height, diameter, colour, heat transfer, transparency
2) External variables: drink temperature, external temperature, sugar or alcoholic drink level
Forecasting matrix (III)

<table>
<thead>
<tr>
<th></th>
<th>Height</th>
<th>Diameter</th>
<th>Colour</th>
<th>Heat transmission</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Diameter</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Colour</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Y</td>
<td>0</td>
</tr>
<tr>
<td>Heat transmission</td>
<td>0</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transparency</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Temperature</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>% of alcohol</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>% of sugar</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

1 = yet existing dependence
0 = not yet existing dependence

Forecasting matrix (IV)

Elements connected with external variables:

3) colour - temperature

- Do adaptive materials exist?
- Who needs such a glass and why?

Useful idea:
- baby’s bottle with chromatic thermometer (safety attribute)

Replacement template (I)

**It substitutes a resource or a component existing in the system or in its immediate neighbourhood to satisfy a specific function**

New component characteristics:
- available in the local context
- fulfill required function

Replacement template (II)

Some definitions:

- **Component**: autonomous part or subsystem (static object)
- **Internal component**: in the product, under control
- **External component**: in close contact with product, out of control
- **Link between two components**: 1) Controlling component 2) Controlled component
- **Product configuration**: the whole links of the product

Replacement template (III)

**Case study: a chair**

- Internal components: legs, seat, back
- External components: floor, wall, user

Replacement template (IV)

- Intrinsic component elimination (without removing its function)
**Replacement template (V)**

- Individuation of a component substituting 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)

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**Displacement template**

**It excludes an intrinsic component and its functions from product configuration**

**Case study: a chair**

- **Seat**
- **Back**

**New chair configuration**

**Physical model of the new chair**

**Legs function is not satisfied and the chair is on the floor**

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

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**Component control template (I)**

**It establishes a new link between internal and external components to eliminate negative links and create a new advantage**

**Operative prescriptions**
- List internal components
- Build a product configuration
- List external components and look for negative connections with product configuration
- Solve them by creating a new link between external and internal components

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**Component control template (II)**

**Ex.: non-UVA shampoo**

- **Product configuration**
- **What external component is in contact with shampoo?**

... hair, head, water, balsam, soap, towel, body, sun rays

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**Component control template (III)**

- **What problems does it create?**

**Sun rays damage your hair!**

- **New physical connection between internal components and sun rays to eliminate the negative link**
**Component control template (IV)**

- **Solution:** shampoo with substances filtering sun rays

**Advantage:** shampoo protects your hair!

NB: it is necessary to include a new component if internal ones can't solve the problem.