

MILANO 1863

DESIGN THINKING FOR

MANAGERIAL BUSINESS

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15 OCTOBER, 2021

WEBINAR

Η



Brief Introduction -What is Design Thinking in your opinion ?

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DESIGN THINIKING: A DEFINITION

Serie(s) of mental processes

to determine what is the most adequate solution

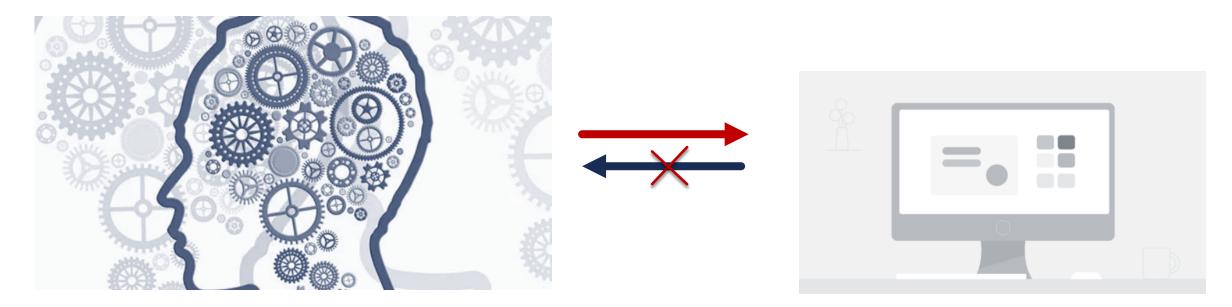
to a given problem

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Mental Processes means:





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To know or to define the problem is half way to solve it!

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To what extent is it useful in Managerial Business?

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WHY DESIGN THINKING IS NEEDED?

Seek Innovation

Add value

Drive Growth

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•Where may Design Thinking be apllied?

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•What are the related constructs?

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Performing a Bibliometrix Review over 1,887 articles/books on the topic of Design Thinking in a related Database – from years 2010 till now, we find:

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POLITECNICO

education computing design/methodology/approach female managers design management information use marketing sales economics thinking ecology surveys technology investments review personnel cybernetics ecosystems employment creativity ecodesign computer simulation researc united sta 12. 80 P man engineering



Terms	Frequency
Administrative data processing	12
Architectural Design	13
Article	34
Artificial intelligence	13
Budget control	13
Budget environments	14
Business management	15
Business process	24
Business process management	14
Commerce	30

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Terms	Frequency
Competition	37
Computer simulation	11
Construction industry	y 17
Costs	11
Creativity	H
Curricula	45
Customer satisfaction	า 21
Cybernetics	L I
Decision making	50
Design	74

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Terms	Frequency
Design management	12
Design thinking	79
Design/methodology/approach	31
Ecodesign	П
Ecology	12
Economic and social effects	19
Economics	16
Ecosystems	П
Education	28
Education computing	П

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Terms	Frequency
Electronic commerce	14
Employment	П
Engineering education	34
Enterprise resource management	18
Environemntal management	21
Female	13
Human	36
Human computer interaction	19
Human engineering	14
Human resource management	36

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Terms	Frequency
Humans	31
Industrial management	38
Industry	34
Information management	60
Information systems	37
Information technology	28
Information use	13
Innovation	42
Innovation management	15
Investments	12

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Terms	Frequency
Knowledge based systems	13
Knowledge management	63
Leadership	22
Learning systems	13
Life cycle	39
Management	40
Management information systems	14
Management science	29
Managers	24
Manufacture	26

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Terms	Frequency
Marketing	19
Methodology	13
Organization and management	22
Personnel	14
Personnel training	14
Planning	27
Priority journal	12
Problem solving	31
Process engineering	20
Product design	93

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Terms	Frequency
Product development	38
Professional aspects	16
Project management	71
Research	19
Research and development management	12
Review	13
Risk assessemnt	14
Risk management	21
Sales	22
Societies and institutions	29

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Terms	Frequency
Software design	16
Software engineering	15
Strategic planning	39
Structural design	14
Students	52
Supply chain management	24
Supply chains	23
Surveys	17
Sustainable development	64
System theory	21

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Terms	Frequency
Systems analysis	24
Systems engineering	14
Systems thinking	16
Teaching	34
Technology	12
Technology transfer	14
Thinking	12
Total quality management	28
United States	25
Waste management	16

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PROTOCOL FOR KNOWLEDGE



Conduct research

Formulate personal conclusions

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DESIGN PROCESS





An abstract example

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HOW TO DESIGN THE FOLLOWING? \$10 + \$5 = \$15 Impossible??

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•HOW TO DESIGN THE FOLLOWING?

\$10 + \$5 = \$15

Let's assume that I manufacture a product at \$10 cost and that my profit is \$5 net.

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• HOW TO DESIGN THE FOLLOWING? \$10 + \$5 = \$15

■ *\$10 + \$5 = \$15* \$10 + \$5 = \$15

\$10 + \$5 = \$15

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OF COURSE, NOT!!

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• HOW TO DESIGN THE FOLLOWING?

I. Study the cost components, e.g.

$$($2 + $3 + $5) + $5 = $15$$

$$($4 + $4 + $2) + $5 = $15$$

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HOW TO DESIGN THE FOLLOWING?
\$10 + \$5 = \$15

- (\$2 + \$3 + \$5) + \$5 = \$15
- I. Study the cost components
- 2. Define Constraints and Variables
- (ax + by + cz) + \$5 = \$15
- Where a, b and c are constants and x, y and z are variables

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HOW TO DESIGN THE FOLLOWING? \$10 + \$5 = \$15



3. Determine what can be changed and how much?

(ax + by + cz) + \$5 = \$15

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- HOW TO DESIGN THE FOLLOWING?
- \$10 + \$5 = \$15
- (\$2 + \$3 + **\$5**) + \$5 = \$15
- (ax + by + cz) + \$5 = \$15
- 4. Study all possibilities according to your case!
- For instance, I might be able to reduce the \$5 to \$3.
- i.e. the component \$3 is fixed; but; the \$2 may just, totally, removed.

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• HOW TO DESIGN THE FOLLOWING?

$$10 + 5 = 15$$

- (\$2 + \$3 + **\$5**) + \$5 = \$15
- (ax + by + cz) + \$5 = \$15
- 4. Study all possibilities according to your case!
- (\$2 + \$3 + \$3) + (\$2 + \$5) = \$15
- Your profit is now \$7.



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- HOW TO DESIGN THE FOLLOWING?
- \$10 + \$5 = \$15
- (\$2 + \$3 + \$5) + \$5 = \$15
- (ax + by + cz) + \$5 = \$15
- 4. Study all possibilities according to your case!
- 5. Even more, I can add value to my business:
- (\$10 + \$3) + (\$5 + \$7) = \$13 + \$12 = \$25

By adding an extra cost of \$3 per unit, I might gain \$12 per unit of profit.



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ENDLESS POSSIBILITIES!!

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Design Thinking Suggested Procedures:



- I. Get informed your case
- 2. Conduct a thorough research PESTEL, similar cases, etc.
- **3**. Define constraints and variables
- 4. Examine the variables
- **5**. Determine amount of variation
- 6. Exhaust ALL seen possibilities

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Design Thinking Suggested Procedures:

- 7. Look for the Unforseen
- 8. Set your Design scope
- 9. Design
- I 0. Refine
- II. Re-Design
- I 2. Refine again
- I 3. Iterate





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To what question does Design Thinking respond to?

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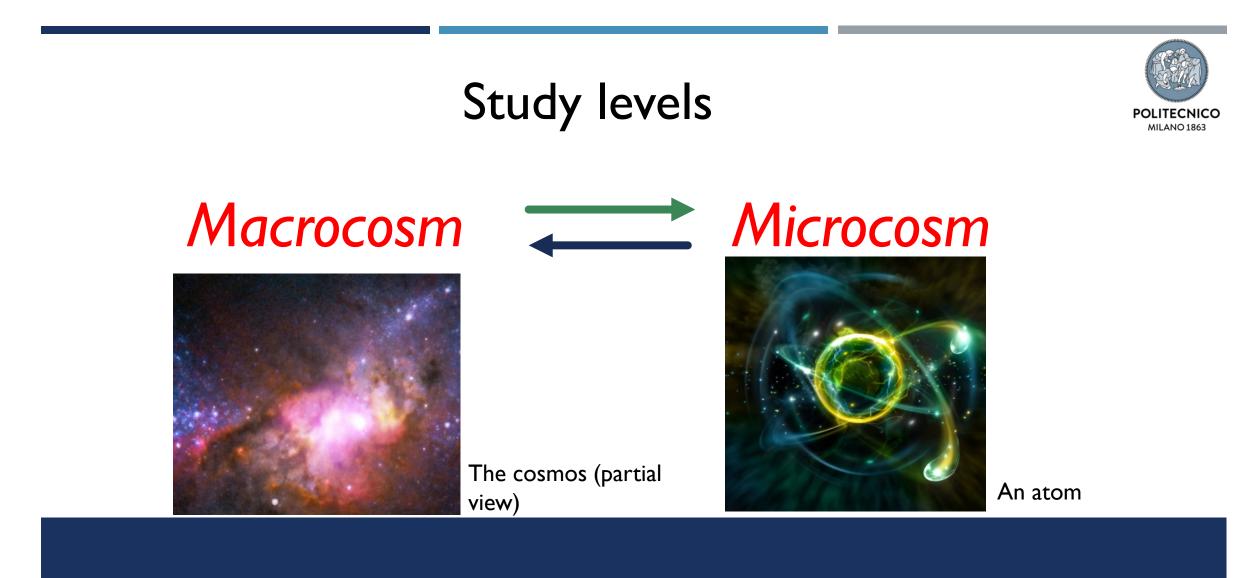
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Are you running out of ideas?

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GO GREEN !!!!

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GREEN FUEL FOR PRODUCTION



- GREEN MATERIALS
- GREEN PROCESSES
- GREEN TRANSPORTATION



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•Would you like to excel?

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LEARN FROM NATURE !!!!





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Do you need an external point of view?

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Need more help? Ask an Expert

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THANK YOU!!!

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