



FIRST REGIONAL CONFERENCE ON
SUSTAINABLE INDUSTRIAL
DEVELOPMENT PROMOTING
SUSTAINABLE ENERGY SOLUTIONS AND
CLEAN TECHNOLOGIES IN
COUNTRIES



THE USE OF RECYCLABLE MATERIALS AND RENEWABLE RESOURCES AS RAW MATERIALS PROBLEM FORMALIZATION

VIENNA, 22-24.11.2017

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The use of recyclable materials and renewable resources as raw materials

1

2

3

4

5

- Formalization of the system description
- Micro level – resource elements
- Macro level - industry
- Connection of BIG Data and Artificial Intelligence
- Organization of B2B recycling plants

Formalization of the system description

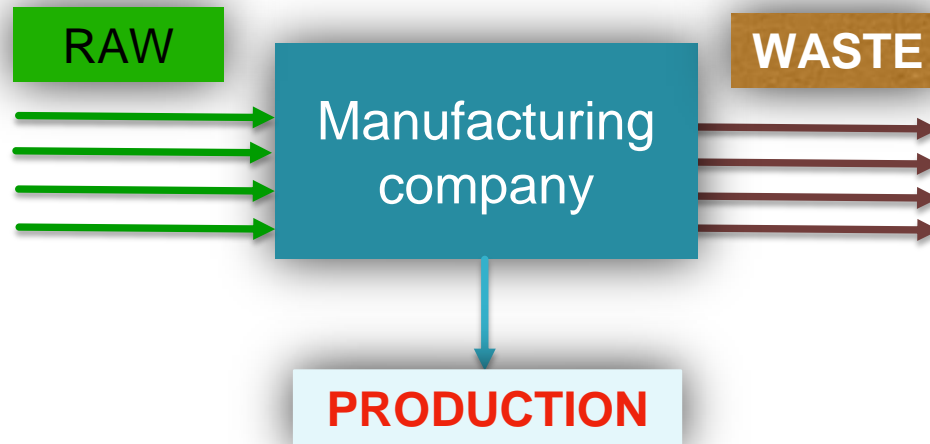
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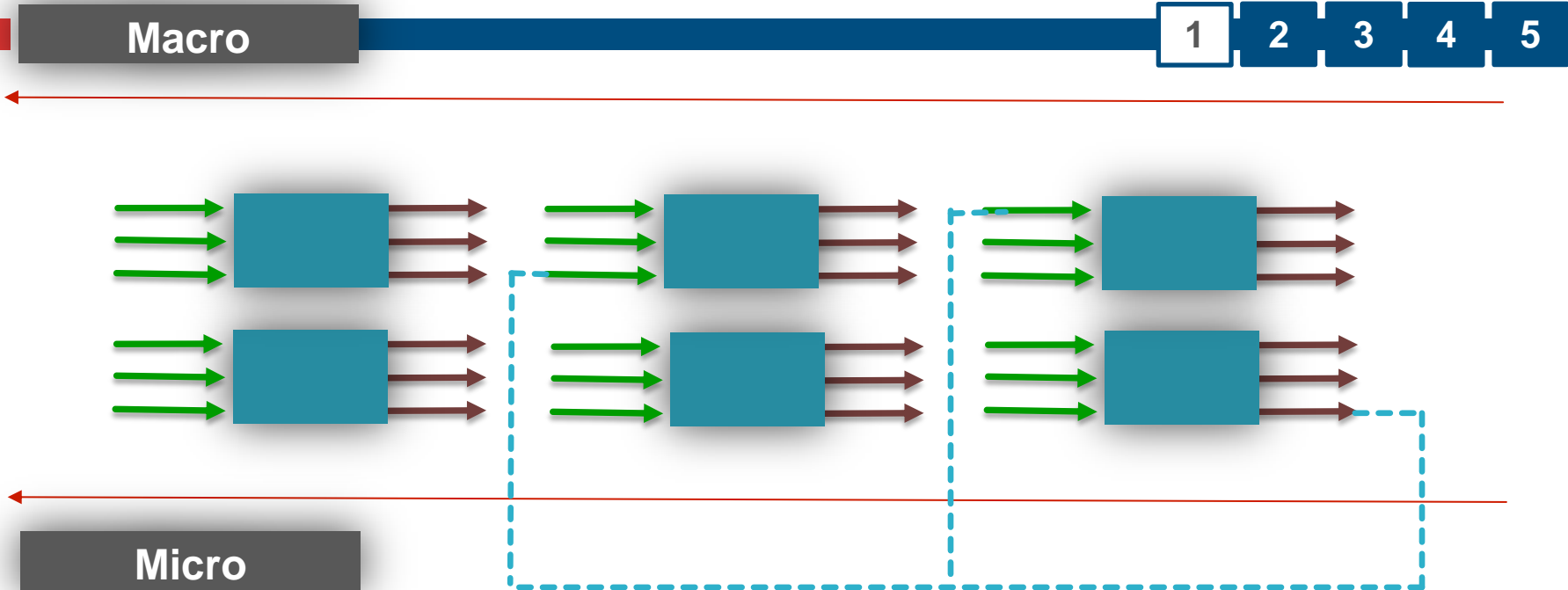
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4

5



Formalization of the system description



Micro level – resources elements

1

2

3

4

5

Manufacture 1

RAW



WASTE



- Elements
- Acceptable deviations of elements' parameters
- Production volume
- Price



ENERGY

- Water
- Electricity
- Thermal energy



Renewable resources

- Elements
- Acceptable deviations of elements' parameters
- Production volume
- Price



Micro level – resources elements

1


2

3

4

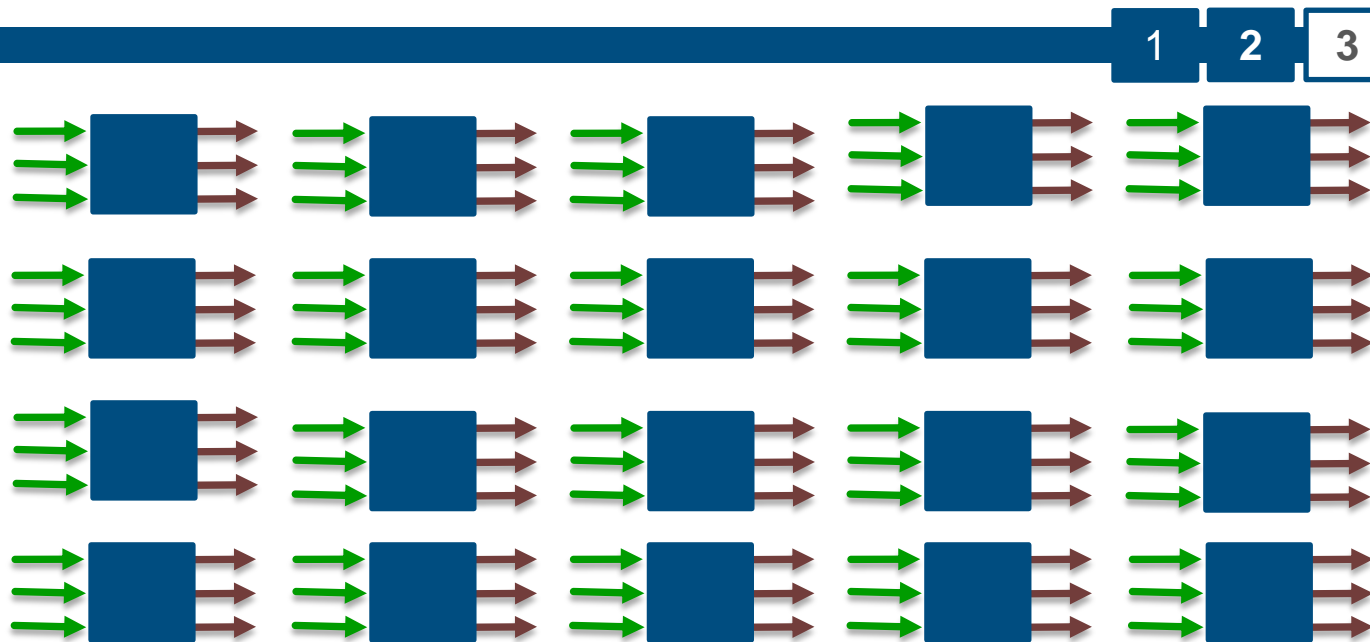
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Technology of waste elements transformation into raw elements

- Sorting
 - Melting
 - Shredding
 - Concentration
 - Litigation
 - Etc.
- 
- Possibility of applying to the element
 - Resource needs
 - Efficiency
 - Cost

Macro

Macro level – industry, agriculture and retail



Connection of BIG Data and Artificial Intelligence

The detailed requirements to the raw product & resources

Macro

1

2

3

4

5

Purpose: to collect the raw materials from waste in the most effective way, within the limits of admissible deviations of elements' characters

Technological plan of waste elements processing into raw material

- Economic effect
- Ecological effect
- Formalization of tasks for new technology development

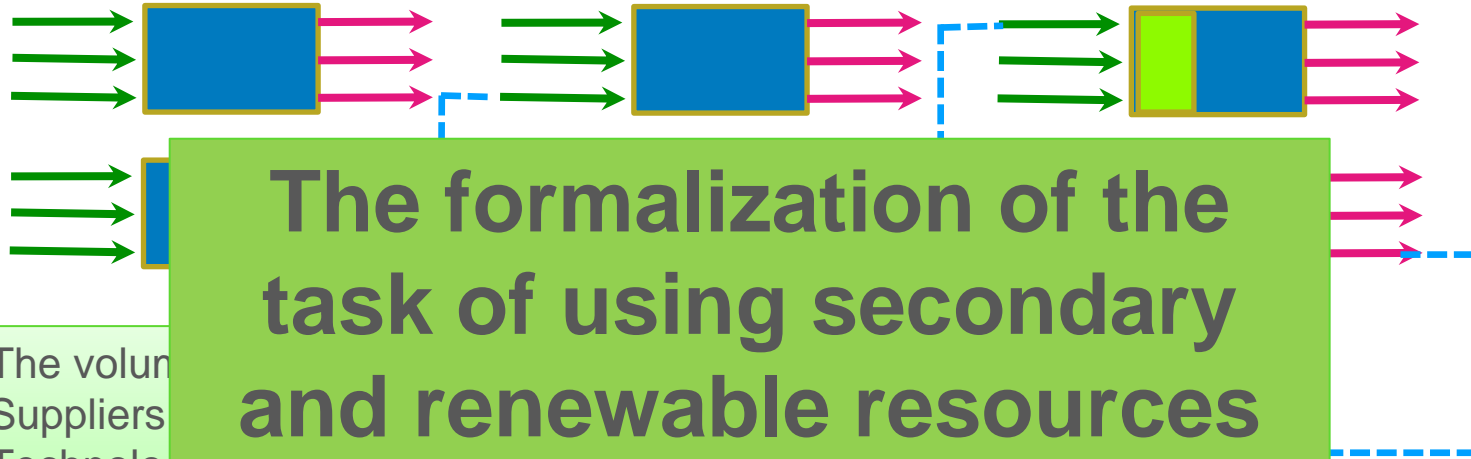
Micro

B2B companies

Micro level – resources elements

B2B recycling plants organization

- 1
- 2
- 3
- 4
- 5



The formalization of the task of using secondary and renewable resources is the right step towards a green economy

- The volume of secondary resources
- Suppliers
- Technologies
- The volume of primary resources and return rates



THANK YOU!

ALEXANDR SOBKO,
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