

# ***Beyond GDP and new indicators of well-being:***

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***is it possible to sum up objective and subjective data in the perspective of constructing new indicators?***

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# Introduction



**The recent debate on new measures of well-being  
urged an important need**



**Integration of objective and subjective information**

**What is clear → integration requires the definition  
of:**

- **a solid conceptual framework**
- **a composite process , including different analytical tools and strategies.**



# Outline



## ***1. Integrating objective and subjective dimensions: defining the conceptual framework***

- i. Let's make clear
- ii. Let's define

## ***2. Integration of objective and subjective information: analytical tools and strategies***



# Outline



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# Defining the conceptual framework



(i) Let's make clear → **What is "subjective"?**

The term can be referred to

- a. What we are going to observe/measure? → o. & s.
- b. How the characteristics are modeled? → s.
- c. In which way data are analyzed? → o.

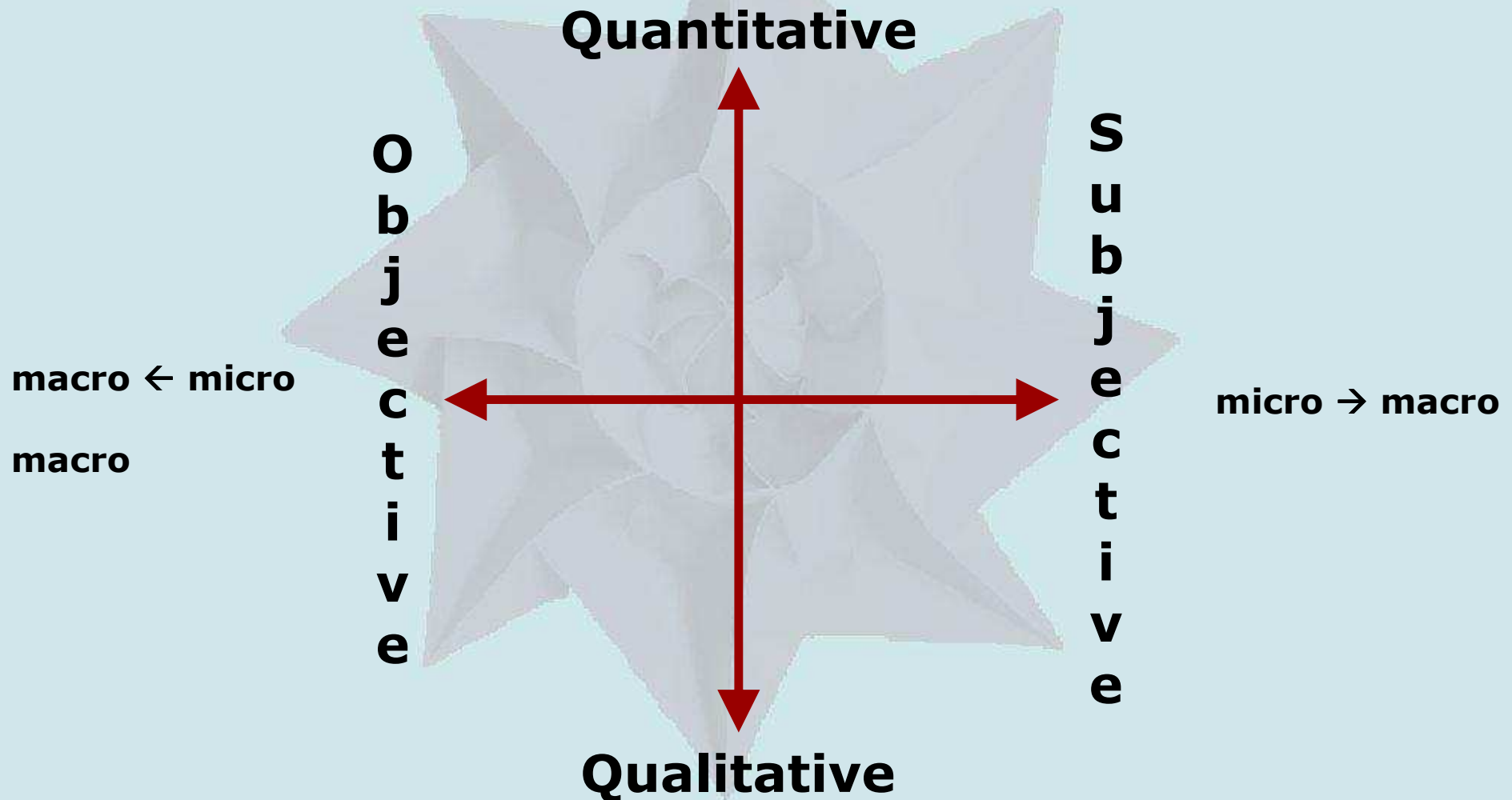


# Defining the conceptual framework

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(i) Let's make clear → **What is "subjective"?**



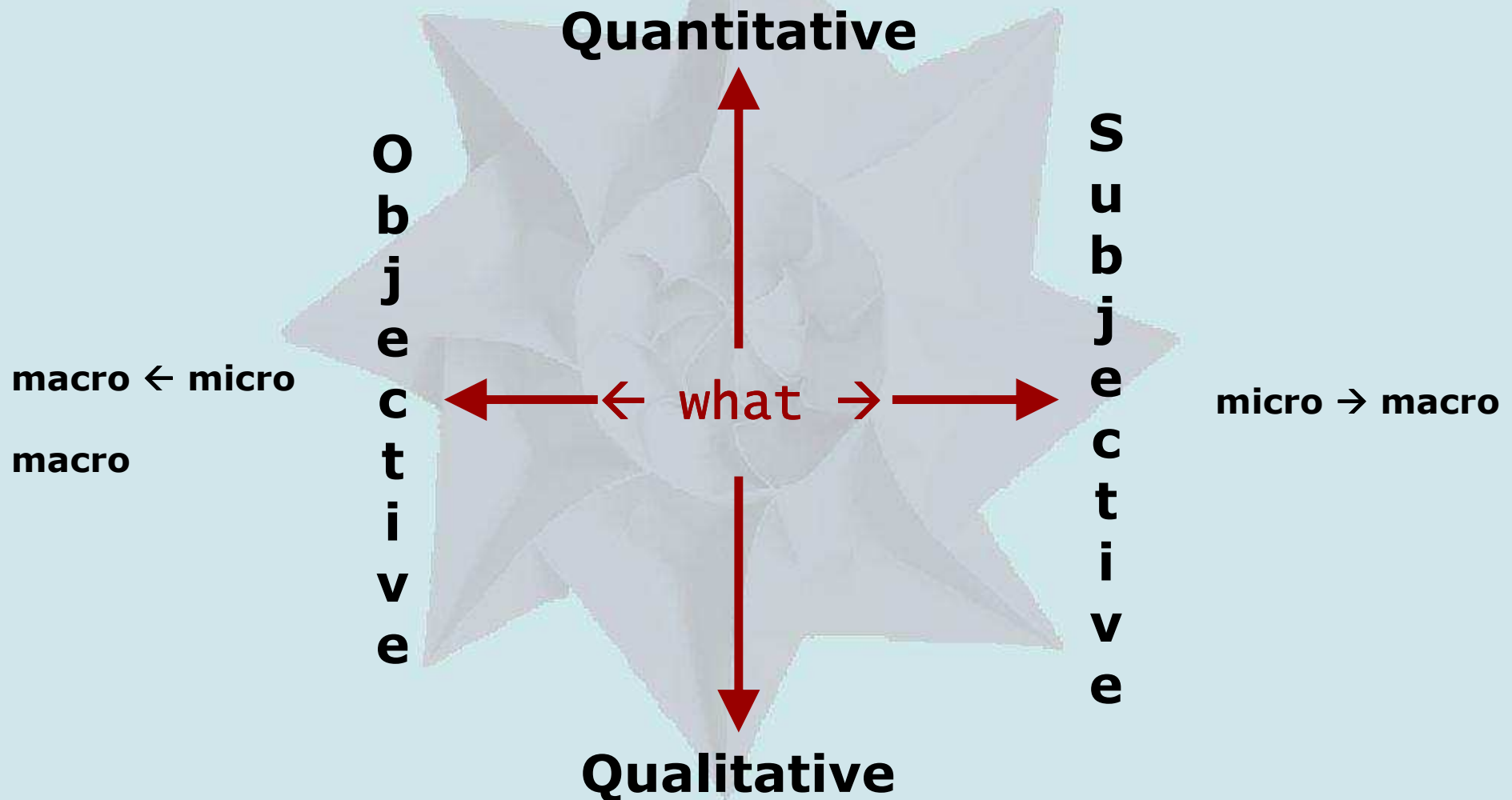


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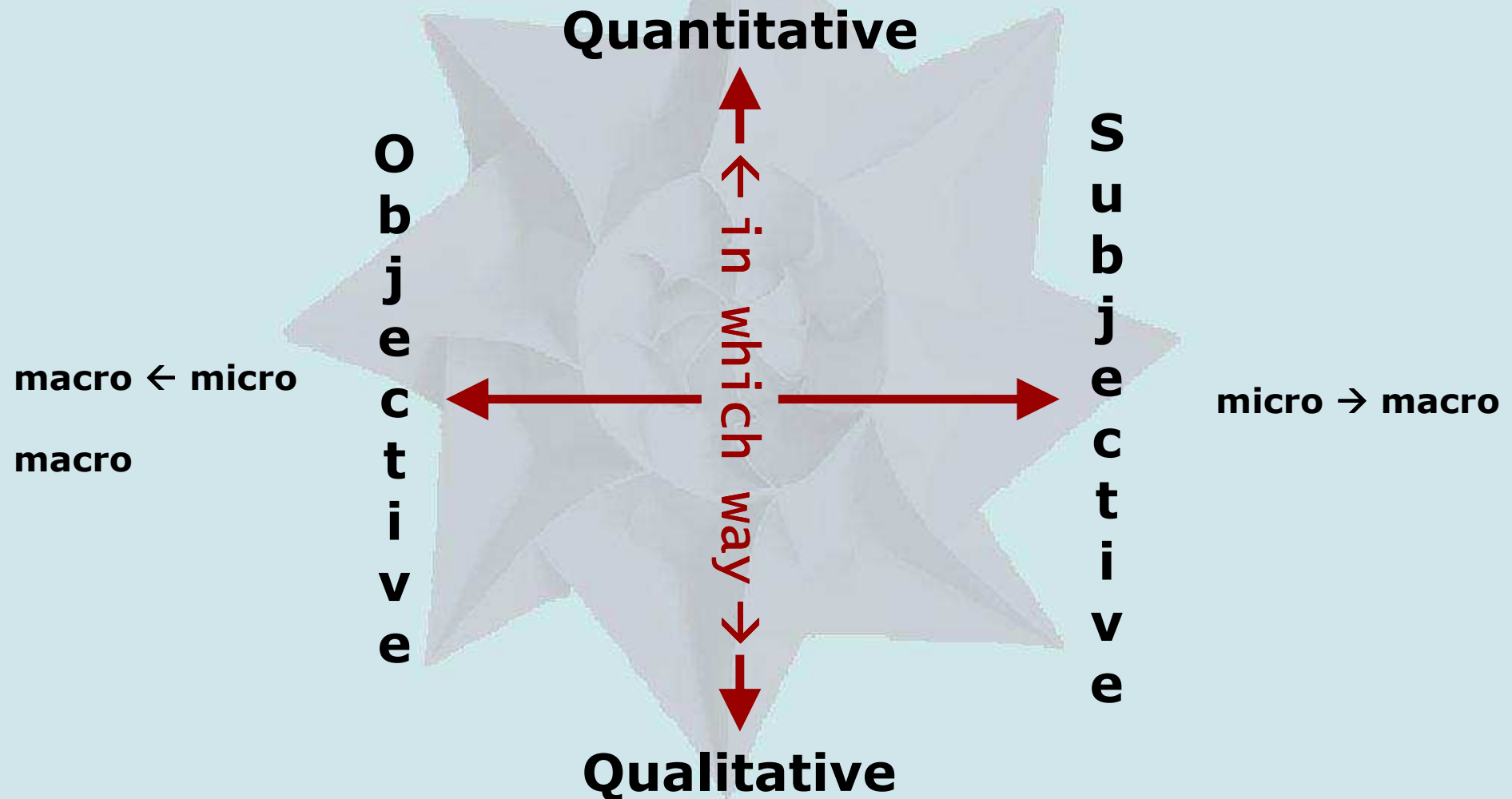


# Defining the conceptual framework

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(i) Let's make clear → **What is "subjective"?**







# Defining the conceptual framework



## (ii) Let's define → **What are the objective components?**

Micro level	Demographic and socio-economic characteristics	<ul style="list-style-type: none"><li>- sex</li><li>- age</li><li>- civil/marital status</li><li>- household</li><li>- educational qualification</li></ul>	<ul style="list-style-type: none"><li>- occupation</li><li>- geographical mobility (birthplace / residence / domicile)</li><li>- social mobility (original family status)</li></ul>
	Observable acquired knowledge	<ul style="list-style-type: none"><li>- skills</li><li>- cognition</li></ul>	<ul style="list-style-type: none"><li>- know-how</li><li>- competences</li></ul>
	Individual living conditions (resources)	<ul style="list-style-type: none"><li>- standards of living</li><li>- financial resources (income)</li><li>- housing</li></ul>	<ul style="list-style-type: none"><li>- working and professional conditions and status</li><li>- state of health</li></ul>
	Social capital	<ul style="list-style-type: none"><li>- social relationships</li><li>- freedom to choose one's lifestyle</li></ul>	
	Observable behaviours and life style	<ul style="list-style-type: none"><li>- activities (work, hobby, vacation, volunteering, sport, shopping, etc.)</li></ul>	
		<ul style="list-style-type: none"><li>- engagements (familiar, working, social, etc.)</li></ul>	
		<ul style="list-style-type: none"><li>- habits (schedule, using of public transport and of means of communication, diet, etc.)</li></ul>	
		<ul style="list-style-type: none"><li>- public life (participation, voting, etc)</li></ul>	



# Defining the conceptual framework



(ii) Let's define → **What are the objective components?**

Macro level	Structure of societies	Social conditions	Social exclusion	Disparities, equalities/inequalities, opportunities
			Social inclusion	Informal networks, associations and organisations and role of societal institutions
		Political setting	Human rights, democracy, freedom of information, etc.	
		Institutional setting	Educational system	
			Health system	
			Energy system	
		Economical setting	Income distribution, etc.	
	Environmental conditions			
	Decisional and institutional processes			



# Defining the conceptual framework



(ii) Let's define → **What are the subjective components?**

<b>Micro level</b>	<b>Abilities / capacities</b>	intellectual	<ul style="list-style-type: none"> <li>- verbal comprehension and fluency</li> <li>- numerical facility</li> <li>- reasoning (deductive and inductive)</li> <li>- ability to seeing relationships</li> </ul>	<ul style="list-style-type: none"> <li>- memory (rote, visual, meaningful, etc.)</li> <li>- special orientation</li> <li>- perceptual speed</li> </ul>
		special	<ul style="list-style-type: none"> <li>- mechanical skills</li> <li>- artistic pursuits</li> </ul>	<ul style="list-style-type: none"> <li>- physical adroitness</li> </ul>
	<b>Personality traits</b>	<ul style="list-style-type: none"> <li>- social traits</li> <li>- motives</li> </ul>	<ul style="list-style-type: none"> <li>- personal conceptions</li> <li>- adjustment</li> </ul>	<ul style="list-style-type: none"> <li>- personality dynamics</li> </ul>
	<b>Sentiments</b>	Interests and preference		
		Values		
		Attitudes	cognitive → evaluations (beliefs, evaluations opinions)	
			affective → perceptions (satisfaction and emotional states – i.e., happiness)	
			behavioural intentions	



# Defining the conceptual framework

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(ii) Let's define → **What is their relationship?**

Objective characteristics → descriptive /  
background components

Subjective characteristics → evaluative components



# Defining the conceptual framework



(ii) Let's define → **What is their relationship?**

Objective living conditions



Subjective well-being

Social and economic development



Quality-of-life improvement



# Defining the conceptual framework



(ii) Let's define → **What is their relationship?**

Comparison of objective  
conditions



Subjective well-being

		Ambits of comparison				
		Housing	Work	Family	Friends	.....
Standards of comparison	previous experiences					
	with other people					
	with aspirations					



# Defining the conceptual framework



(ii) Let's define → **What is their relationship?**

Comparison of objective  
conditions



Subjective well-being

- Ⓢ smaller the perceived gap
- Ⓢ higher the subjective well-being

- ➡ **through** different comparators
- ➡ **with reference** to different ambits (housing, work, family, friends, etc.).





# Defining the conceptual framework

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(ii) Let's define → **What is their relationship?**

Multiple discrepancies approach

Subjective well-being ← *perceived gap between*

*what one  
has  
wants*



*what*  
others have  
one has had in the past  
one expected to have  
one expected to deserve  
expected with reference to needs

**happiness** → not dependent on living conditions



# Defining the conceptual framework

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(ii) Let's define → **What is their relationship?**

Disposition approach

Stable individual characteristics  
(personality traits)



Subjective well-being



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(ii) Let's define → **What is their relationship?**

Causal approach (I)

Subjective well-being = “reactive state” to the environment



*bottom-up*

The sum of the reactive measures for the defined ambits allows subjective well-being to be quantified



# Defining the conceptual framework

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(ii) Let's define → **What is their relationship?**

Causal approach (II)

Individual stable traits → Subjective well-being



*top-down*



# Defining the conceptual framework



(ii) Let's define → **What is their relationship?**

Causal approach

Subjective well-being



Two components :

- a long-period component (top-down effect),
- a short-period component (bottom-up effect)



*up-down*



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# Integration of objective and subjective information

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In order to evaluate how objective and subjective information can be integrated, we traced the whole process aimed at constructing indicators



a “composite” **process**





# Integration of objective and subjective information

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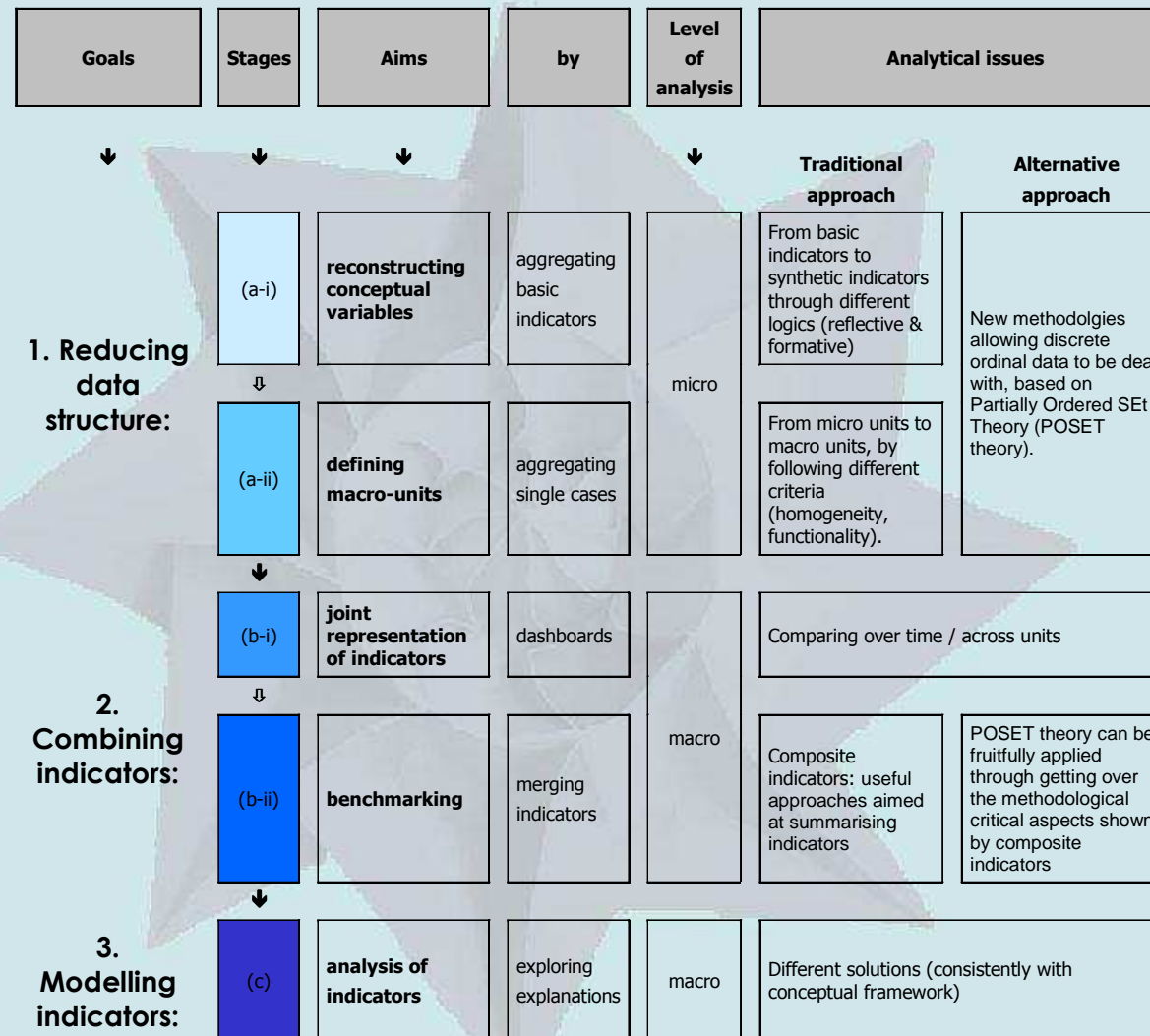
The “composite” **process** is carried out through

1. subsequent/consecutive steps (**Multi-Stage** – MS) pursuing different technical goals
  - i. reducing data complexity
  - ii. combining indicators
  - iii. modelling indicators
2. different/alternative analytical approaches (**Multi-Technique** – MT)



# Integration of objective and subjective information

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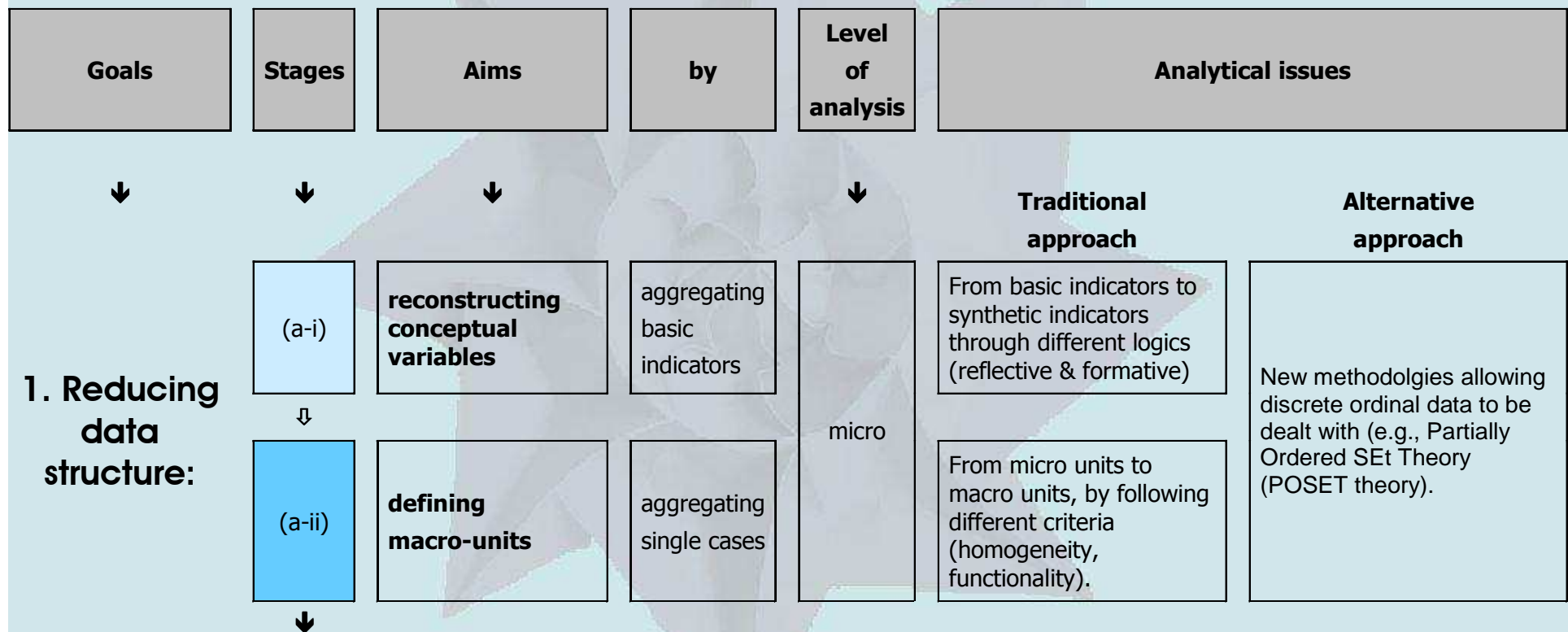


# Integration of objective and subjective information

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## *Multi-Stage Multi-Technique approach*



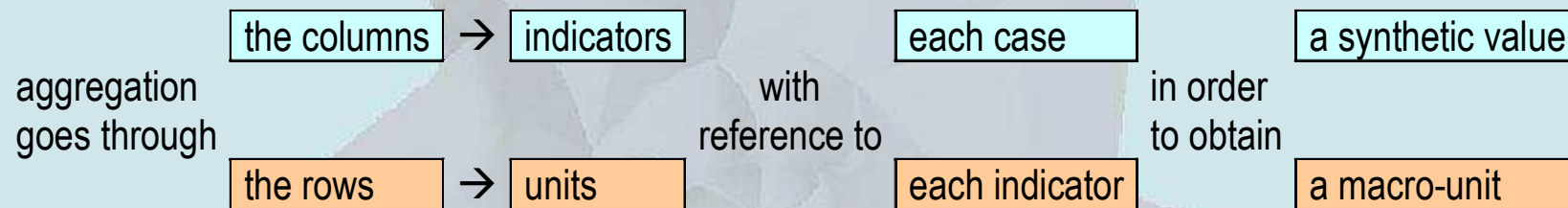


# Integration of objective and subjective information

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## *Multi-Stage Multi-Technique* approach



### Obtaining synthetic indicators



condense and synthesize each dimension  
by referring to the *multiple measures*,  
by defining and adopting particular assumptions

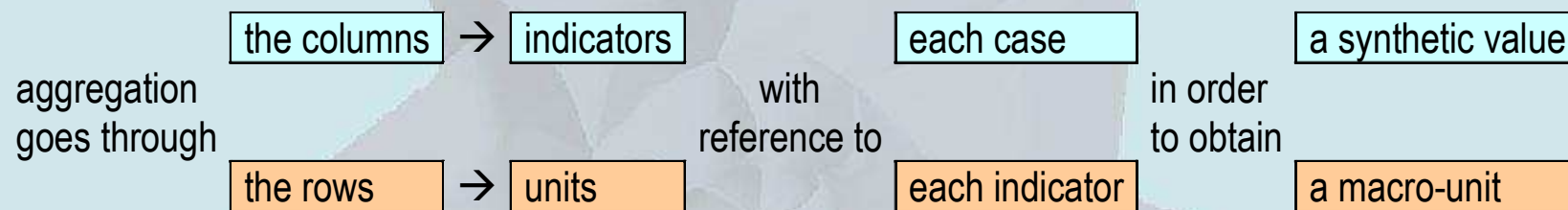


# Integration of objective and subjective information

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## *Multi-Stage Multi-Technique* approach



Obtaining macro-units



condensing values observed at micro/lower levels  
(usually, individual) to higher levels

pre-existent / pre-defined partitions, such as identified *groups* (**social, generation, etc.**), *areas* (**geographical, administrative, etc.**), *time periods* (years, decades, etc.)

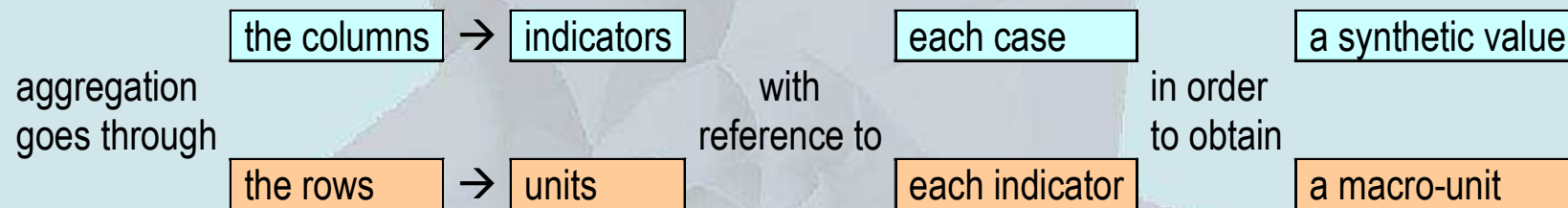


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## *Multi-Stage Multi-Technique approach*



Reducing data structure does not lead to the integration of objective and subjective data.



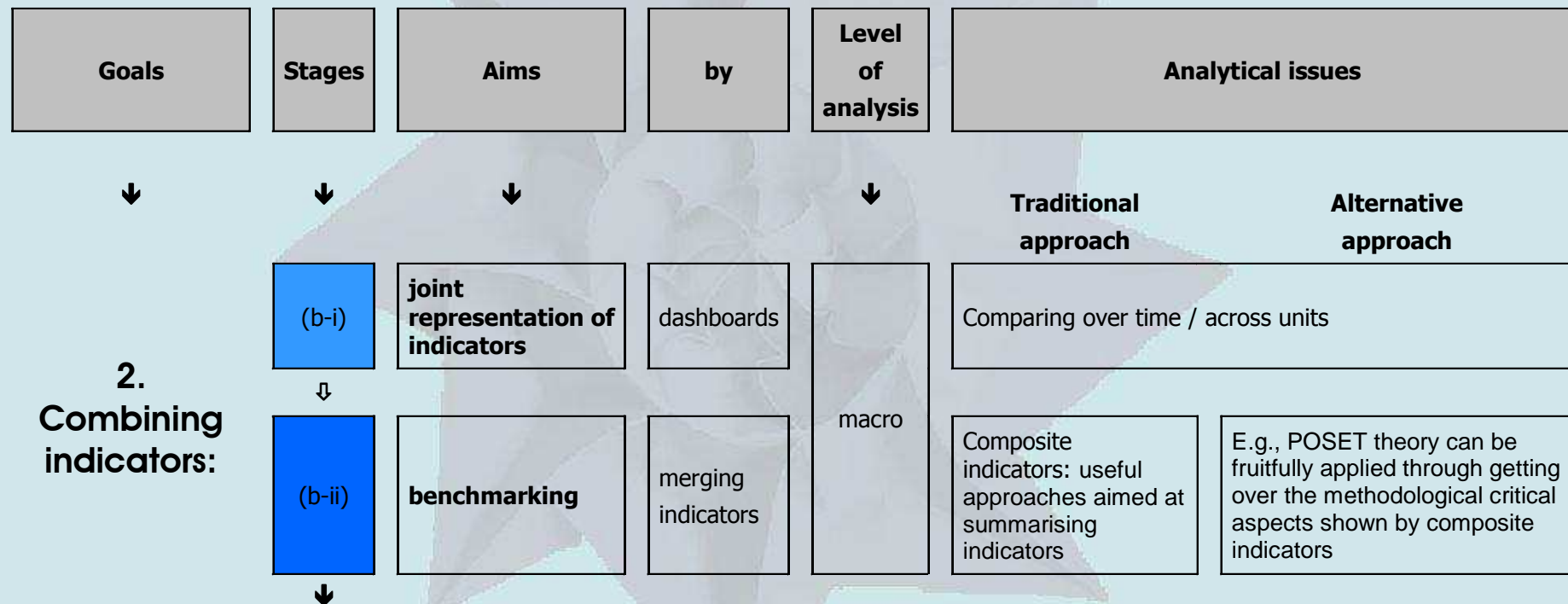


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## *Multi-Stage Multi-Technique approach*







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*Multi-Stage Multi-Technique approach*

## **A. Joint representation of indicators**

e.g. dashboards → first approximate and rough idea of integration

## **B. Merging indicators**

e.g. composite indicators → could be carefully considered as one of the possible solutions for integration

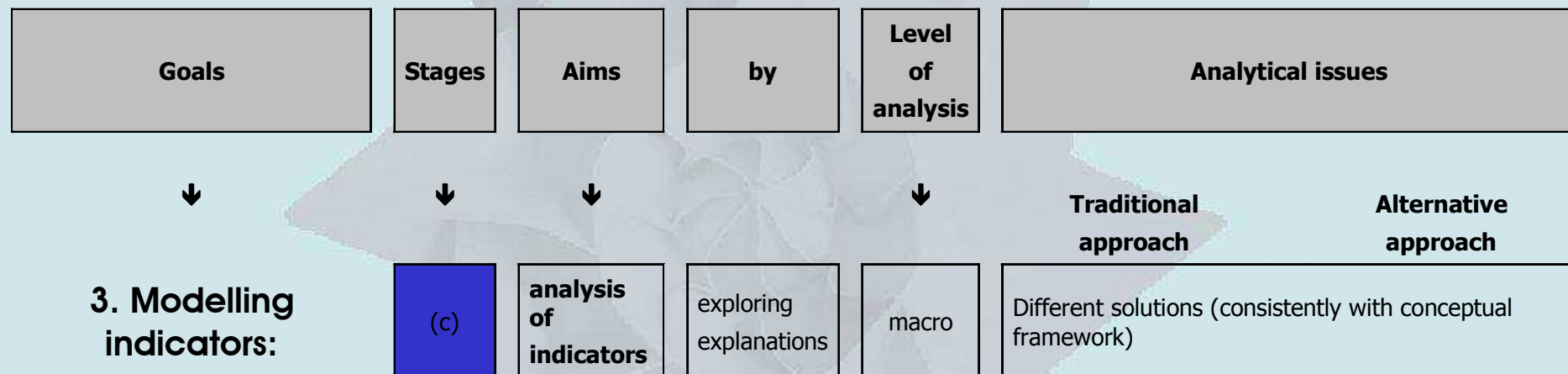


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## *Multi-Stage Multi-Technique approach*





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*Multi-Stage Multi-Technique* approach

## **Modelling indicators**

Exploring possible explanations of the relationships among the indicators, in order to (i) conceptually model and (ii) hierarchically design the variables.

In this perspective, a proper analytical approach should be identified according to the defined conceptual framework



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## *Multi-Stage Multi-Technique approach*

- structural models approach
- multi-level approach
- life-course perspective
- Bayesian networks approach
- explorative approach (cluster, correspondences, ...)
- ...



## ***Final remarks***



# Final remarks



What clearly emerges from our works is that:

- integration can be accomplished only at a late moment of the process (*modelling indicators*)

but

- soundness of the selected integration approach and of its results relies on the identified and adopted *conceptual framework*, which assumes the correct perspective according to the pursued integration objectives.



# Final remarks



Integrating objective and subjective information is a **difficult** issue

- ✓ from the conceptual point of view
- ✓ from the methodological point of view
- ✓ because of data availability at different levels





# Final remarks

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Need of more work ....



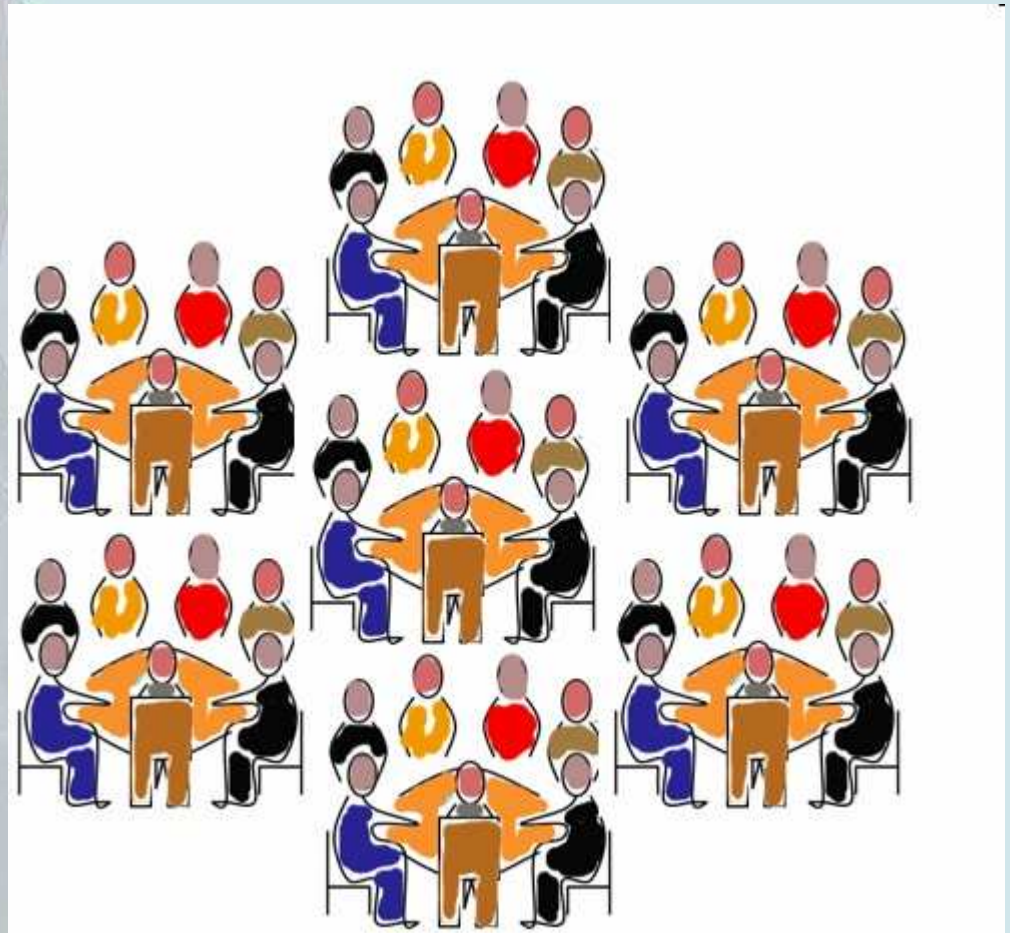


# Final remarks

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Need of more cooperative  
work ....





*Many thanks for your attention*