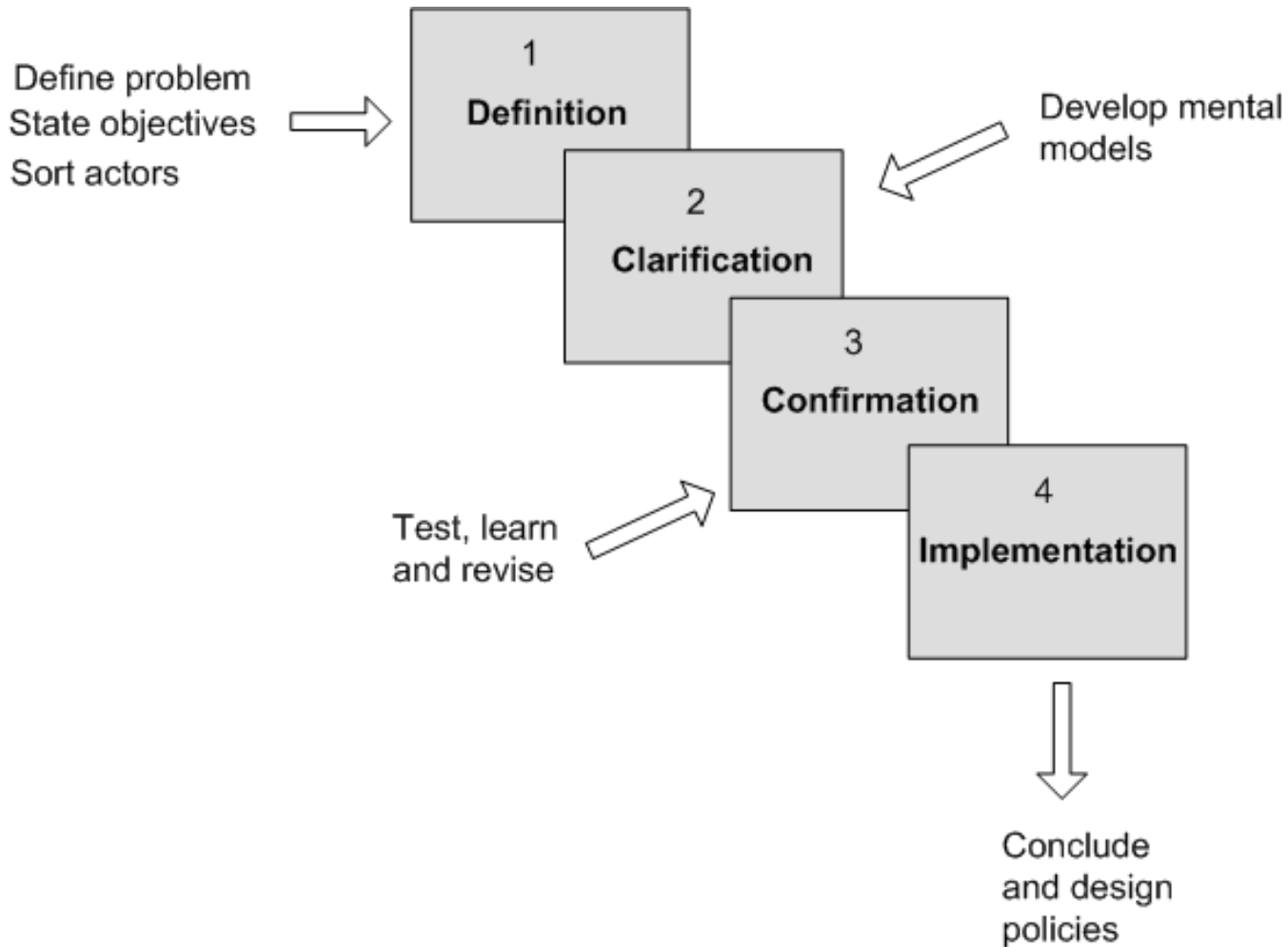


A task to do

Build the first CLD and flow chart

We take the stakeholders through several stages



Common CLD mistakes

- The problem is not clear
- The question is not specific
- Multiple actions are embedded in one variable
- Over simplification
- Lack of structure
- Too many details

How to start using CLD's

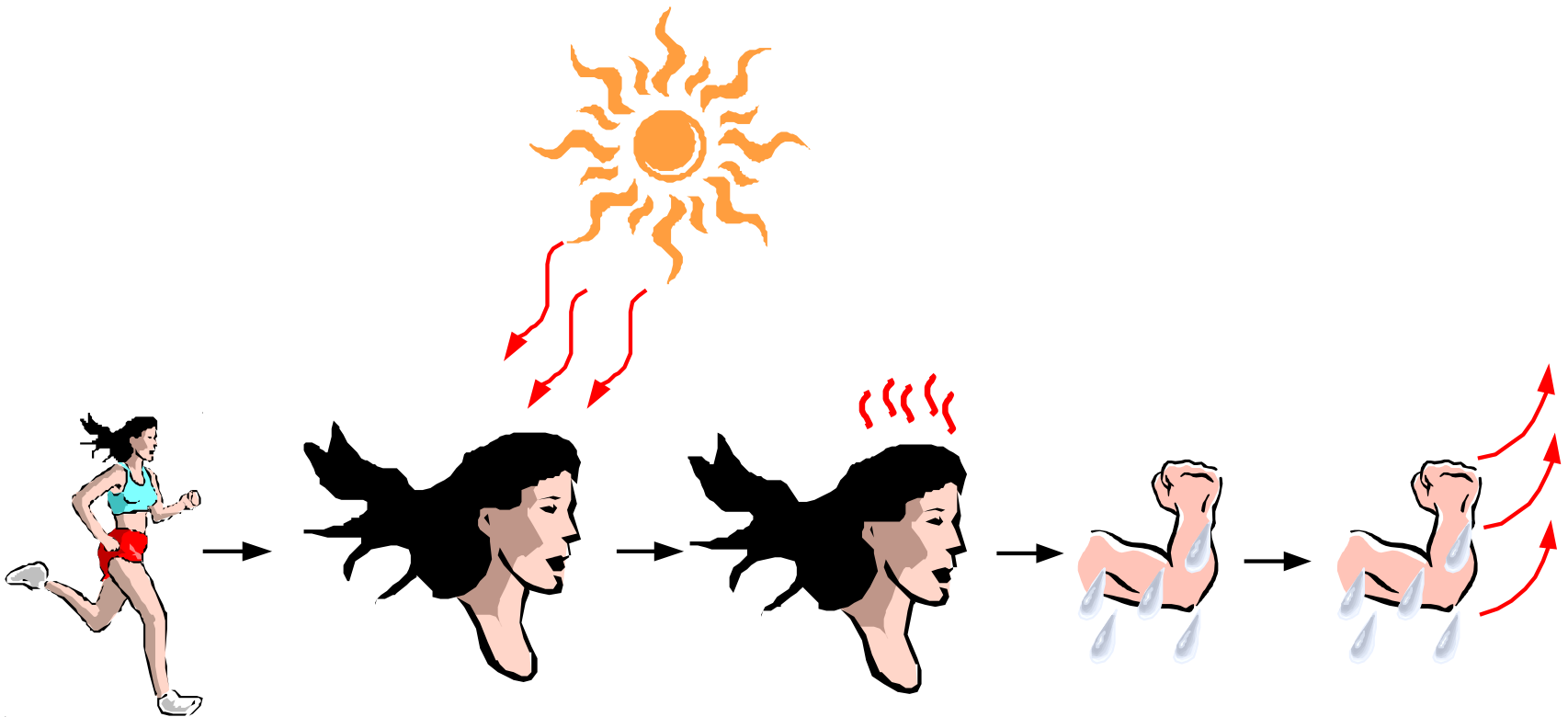
- Define the problem and its boundaries
- Make a very clear question for the problem
- Create a list of the relevant variables
- Sort the variables according to importance
- Start simple
- Estimate the behaviour of the problem using RBP
– how does it compare to OBP
- Use “nouns” and “verbs”

Basic Table

Fig. 3.12. The items-actions-controls table to be used with problem mapping

Items	Actions	Controls	Controls again

The running girl



The way to go

1. The definition phase
 1. The questions
 2. Brainstormed list of factors involved
2. The clarification phase
 1. Critically evaluate the factors list for relevance, impacts, irrelevance
 2. Make flow chart for what is flowing (tangible, intangible)
 3. Will you use the she sorting table ?
 4. Do the causal loop diagram
3. The verification phase
 1. Test consistency and realizm
 2. Qualitative evaluation, loop analysis
4. The Implementation phase
 1. Make a model (qualitative or quantitative)
 2. Use it for solving tasks, questions, or designs with an intent

Fill in the Table

Fig. 3.12. The items-actions-controls table to be used with problem mapping

Items	Actions	Controls
Water in the girls body	Drink Sweat	Body temperature Thirst
Heat in the girls body	Run Evaporate sweat	
Motivation	Prospect of going to goal Wellbeing	
Energy available in the body	Eating meals	
Distance made		

Draw the links

Fig. 3.12. The items-actions-controls table to be used with problem mapping

Items	Actions	Controls
Water in the girls body	Drink Sweat	Body temperature
Heat in the girls body	Run Evaporate sweat	
Motivation	Prospect of going to goal Wellbeing	
Energy available in the body	Eating meals	

The diagram illustrates the following causal links:

- Items to Actions:**
 - Water in the girls body (+) → Drink
 - Water in the girls body (-) → Sweat
 - Heat in the girls body (+) → Run
 - Heat in the girls body (-) → Evaporate sweat
 - Motivation (+) → Prospect of going to goal
 - Motivation (+) → Wellbeing
 - Energy available in the body (+) → Eating meals
- Actions to Items:**
 - Drink (+) → Water in the girls body
 - Sweat (-) → Water in the girls body
 - Run (+) → Heat in the girls body
 - Evaporate sweat (-) → Heat in the girls body
 - Prospect of going to goal (+) → Motivation
 - Wellbeing (+) → Motivation
 - Eating meals (+) → Energy available in the body
- Controls to Items:**
 - Body temperature (+) → Heat in the girls body
- Hand-drawn Connections:**
 - From 'Body temperature' to 'Sweat' (+)
 - From 'Sweat' to 'Evaporate sweat' (+)
 - From 'Evaporate sweat' to 'Heat in the girls body' (-)
 - From 'Heat in the girls body' to 'Run' (+)
 - From 'Run' to 'Evaporate sweat' (+)
 - From 'Prospect of going to goal' to 'Wellbeing' (-)
 - From 'Wellbeing' to 'Energy available in the body' (+)
 - From 'Energy available in the body' to 'Eating meals' (+)
 - From 'Eating meals' to 'Energy available in the body' (+)

