



# A City is an Organism

Hans Konstapel

Constable Research BV

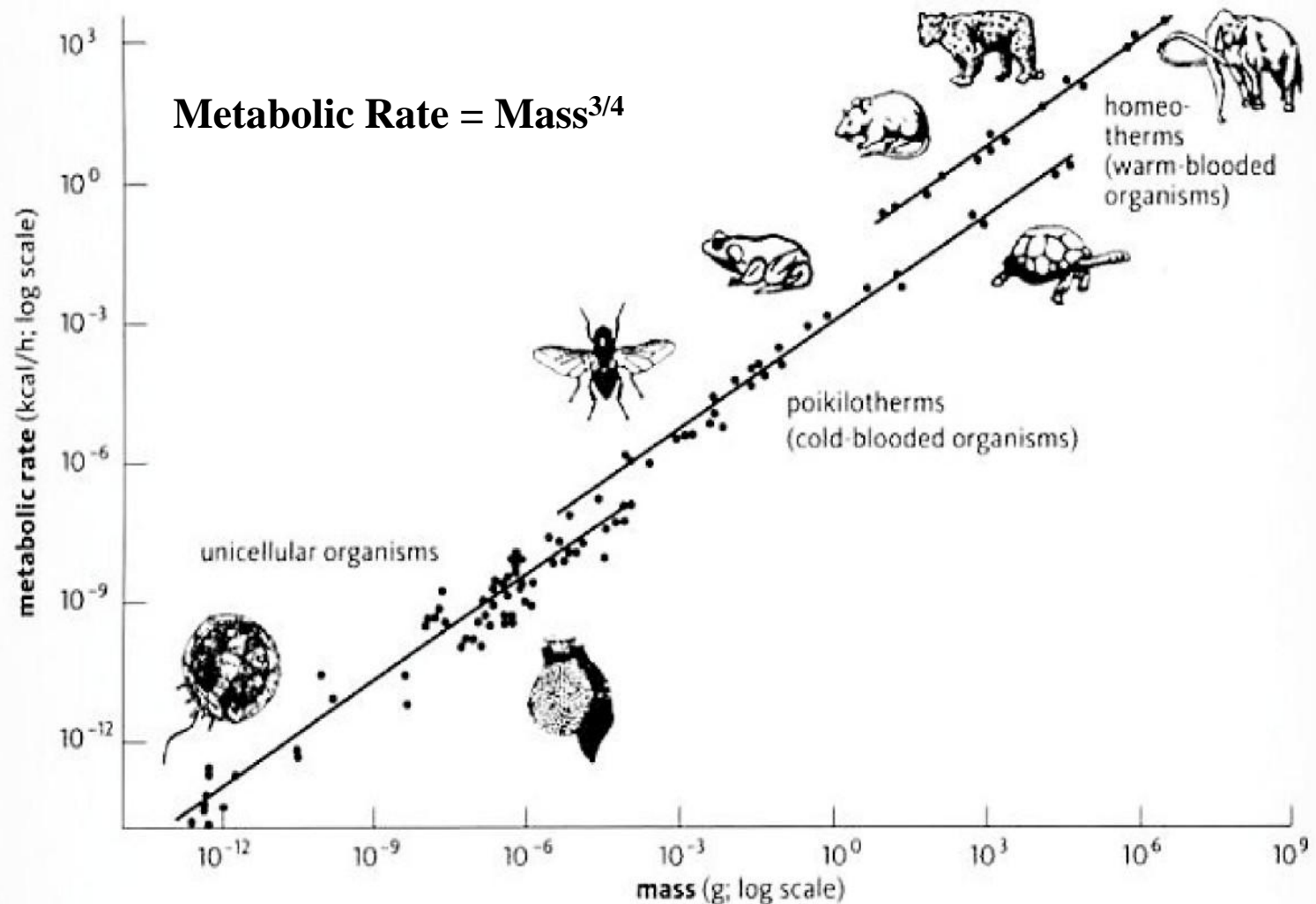
© Copyright 2011 Constable Research BV

The Law of Kleiber shows that  
Big Masses are more Efficient in the  
Use of Energy than Small Masses.

Big Masses also live Longer.

The Law of Kleiber is applicable from the level of the bacteria  
to the level of the City (and probably even further).

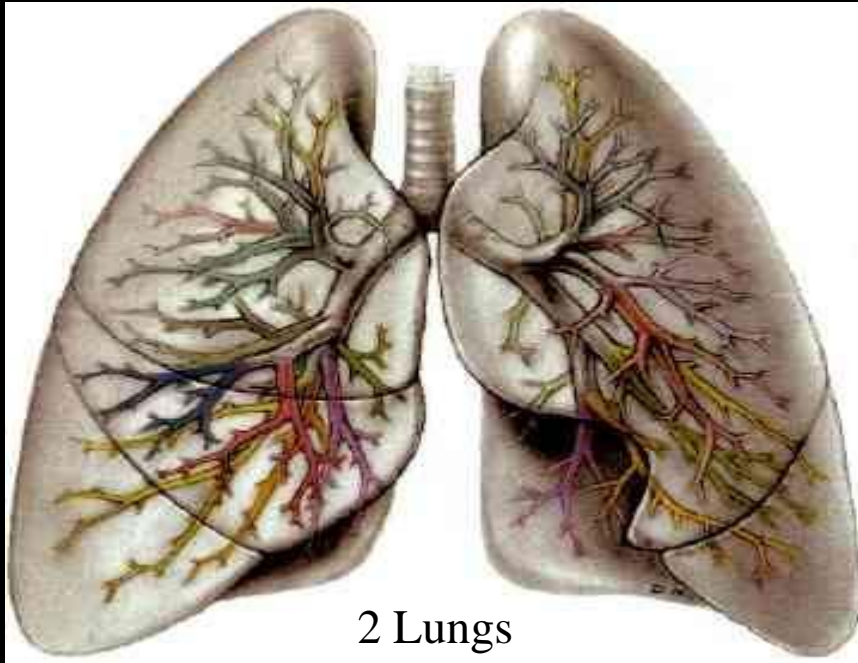
# Law of Kleiber



1 kcal/h = 1.162 watts

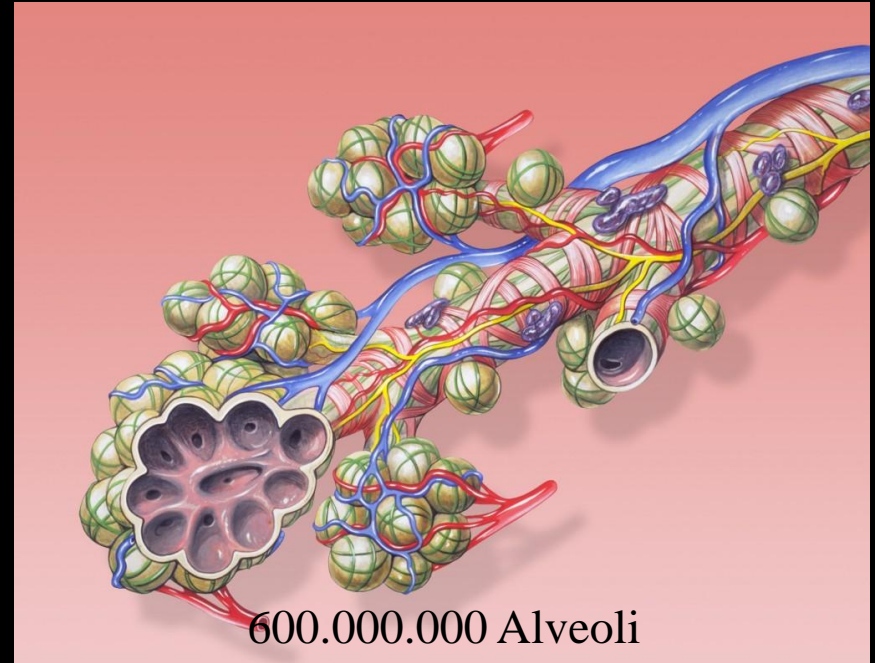
# Explanation

Reservoir is a Scalable  
Fractal Transport System



2 Lungs

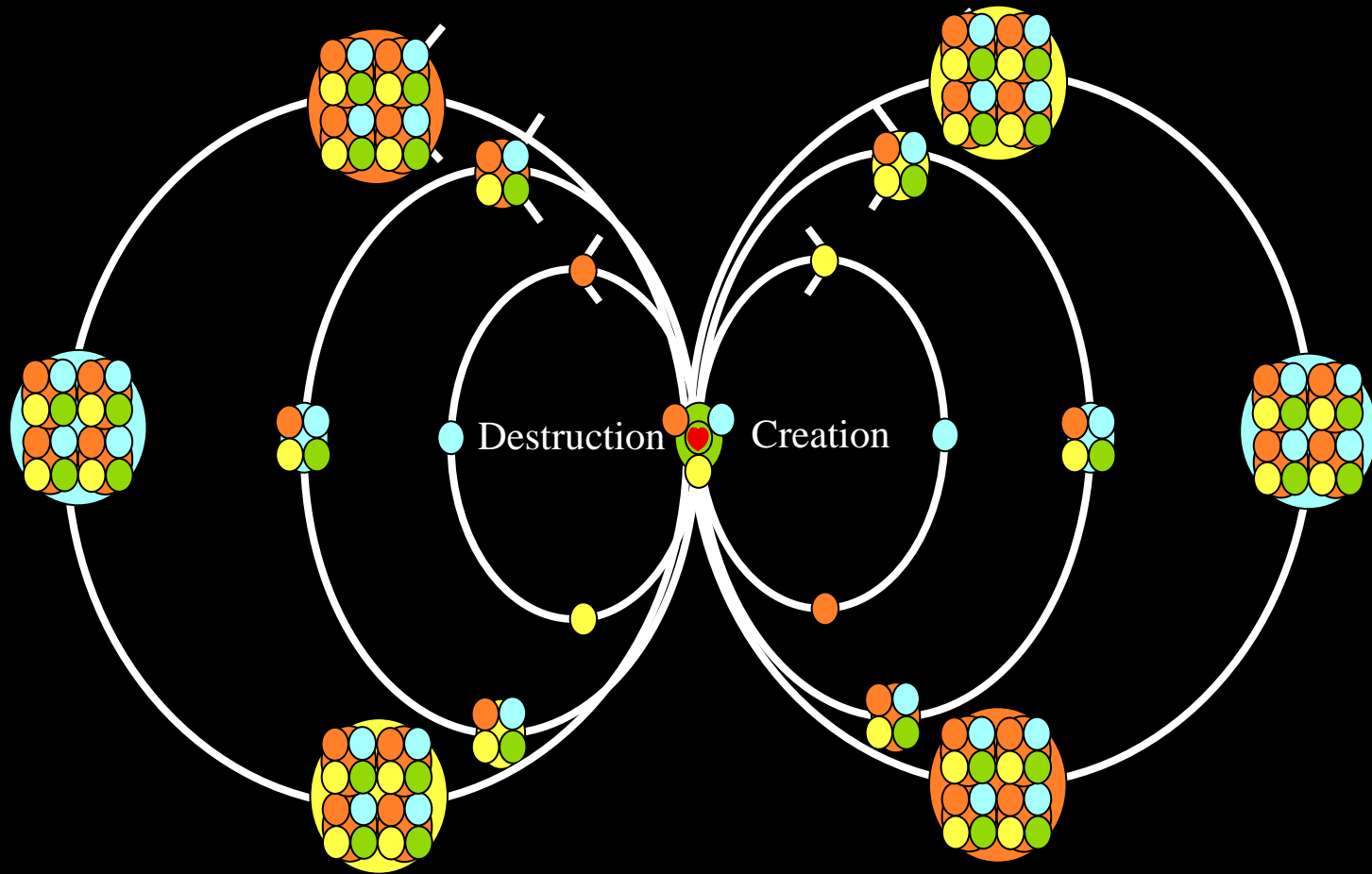
Action takes place in a Huge Amount of  
Small End-Nodes



600.000.000 Alveoli

The Essential Functions of a System are situated on the Lowest Level.

# Cyclic Re-Combination



Bacteria      Sponge      Octopus      Human

→



# Bacteria



Bacteria (Prokaryotes) Share and Combine parts of their Architectural Components (DNA).

# Sponge



Bacteria cooperate in the Sponge.

In the Beginning the Chemical Soup generated **Self-Reproducing** Chemical Factories.

These Factories combined into bigger Factories by exchanging and combining their Factory-Designs.

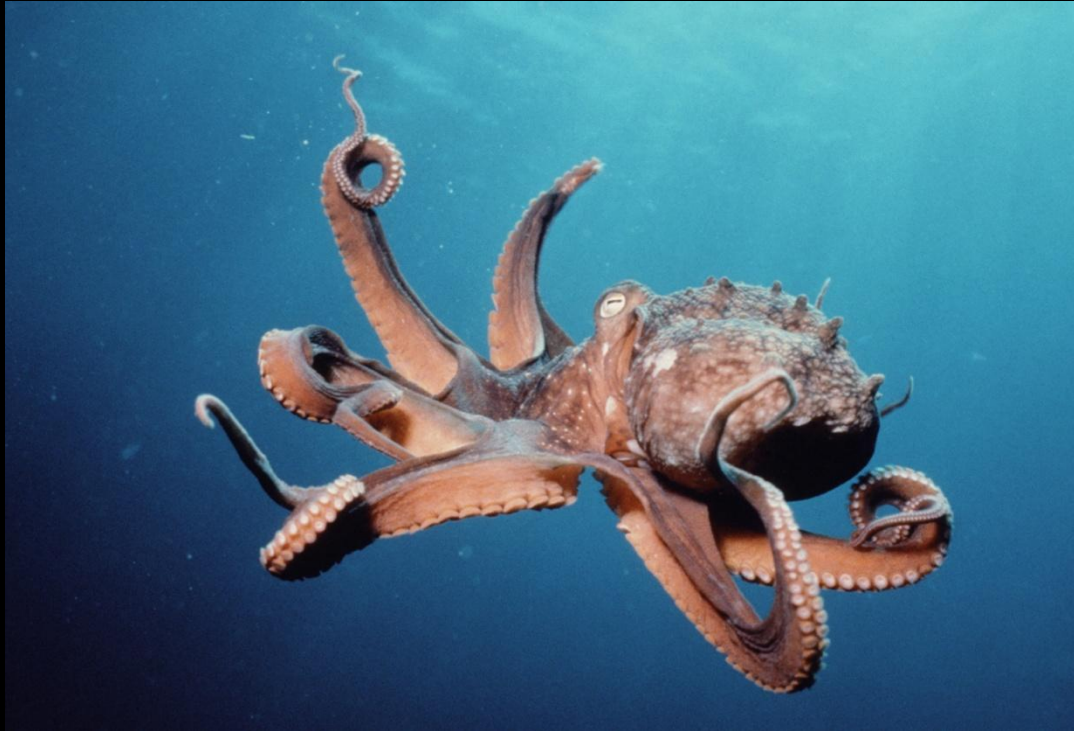
Every time when the Factories fused they became more Efficient, Bigger, Stronger, Older and therefore more Competitive.

When the Factories became more Competitive they had to Protect themselves against the other Factories.

To Protect themselves the Multi-Cellular Systems started to Sense in Many Directions and became better and better in Predicting the Future.



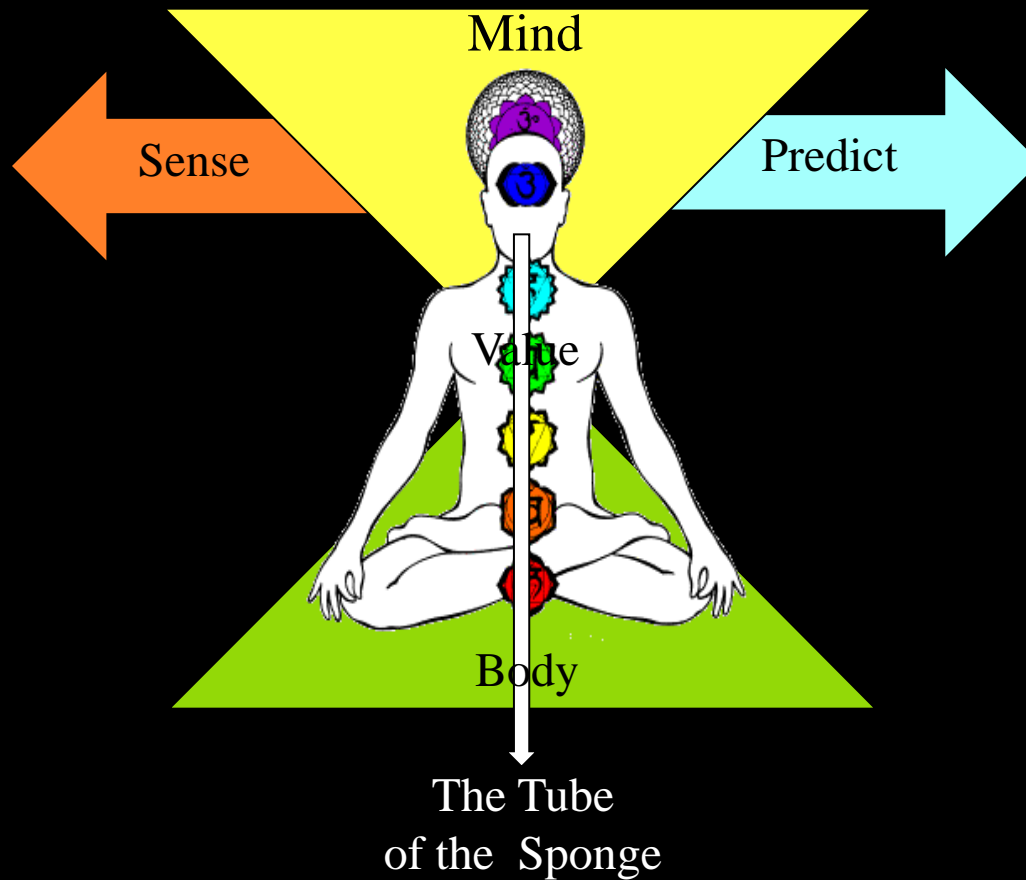
# Bilateria



An Octopus is a Sponge, that Moves, Senses and Predicts. The Mind and the Body are Mirrored.  
That is why this group is called the Bilateria.

# Human

The Human is an  
Imaginative Octopus

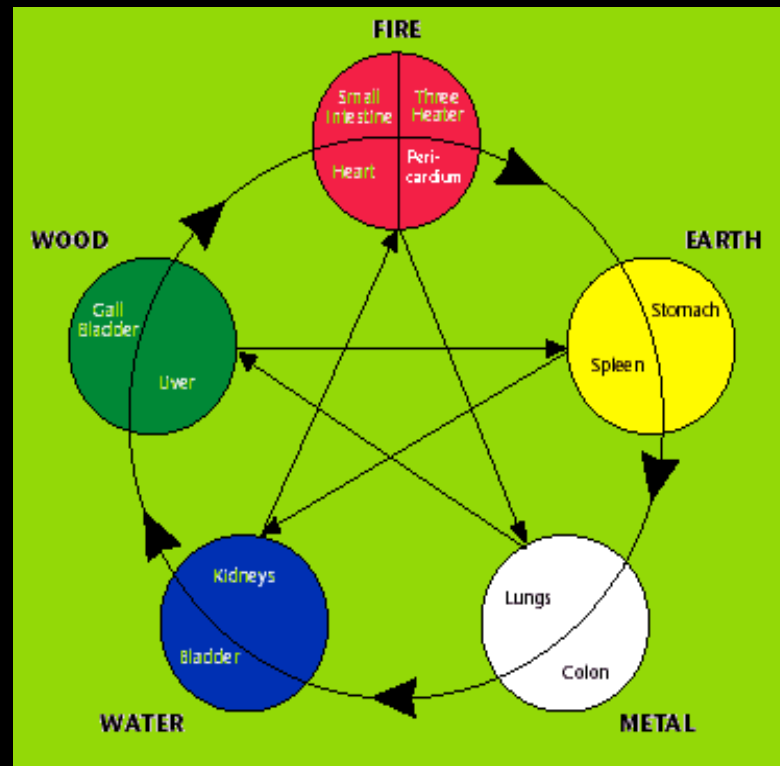


# Body

Monitoring  
Rhythm  
Coordination

Waste  
Processing  
Heating

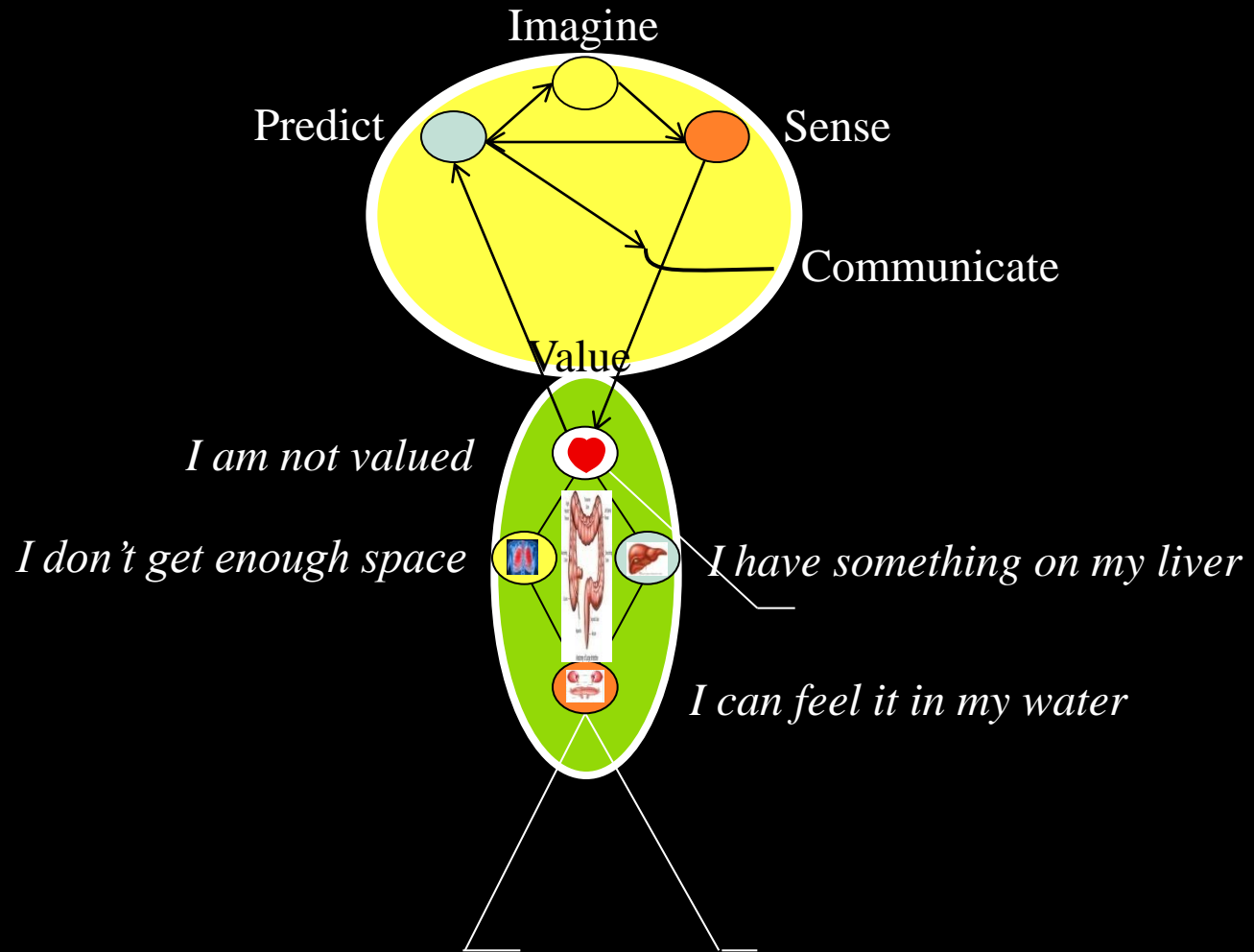
Filter  
Excrete



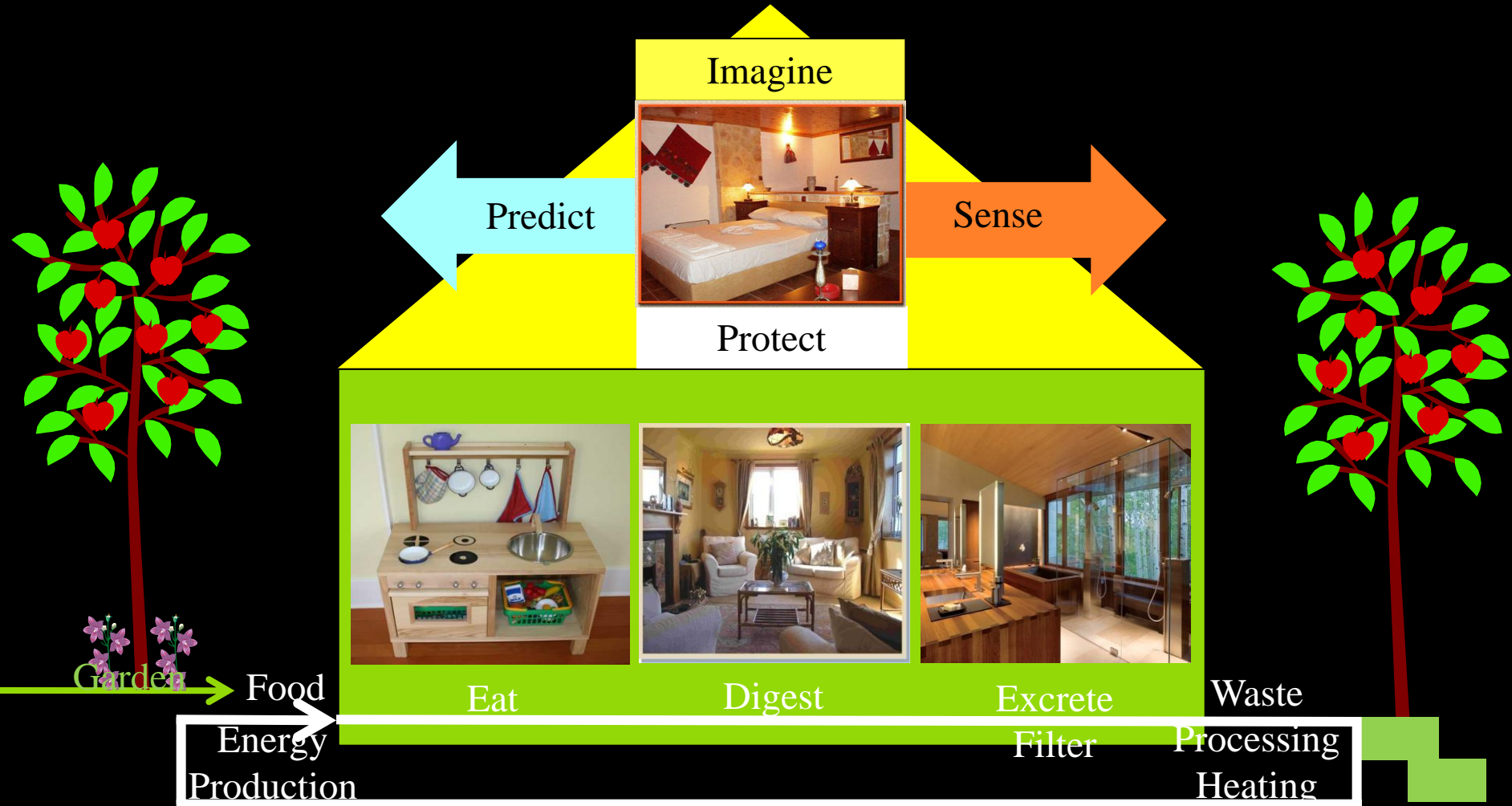
Skin  
Protection  
Defense  
Digestion

Energy  
Production  
Transport

# Your Mind Speaks Your Body



# A Building is a Body, not a Façade



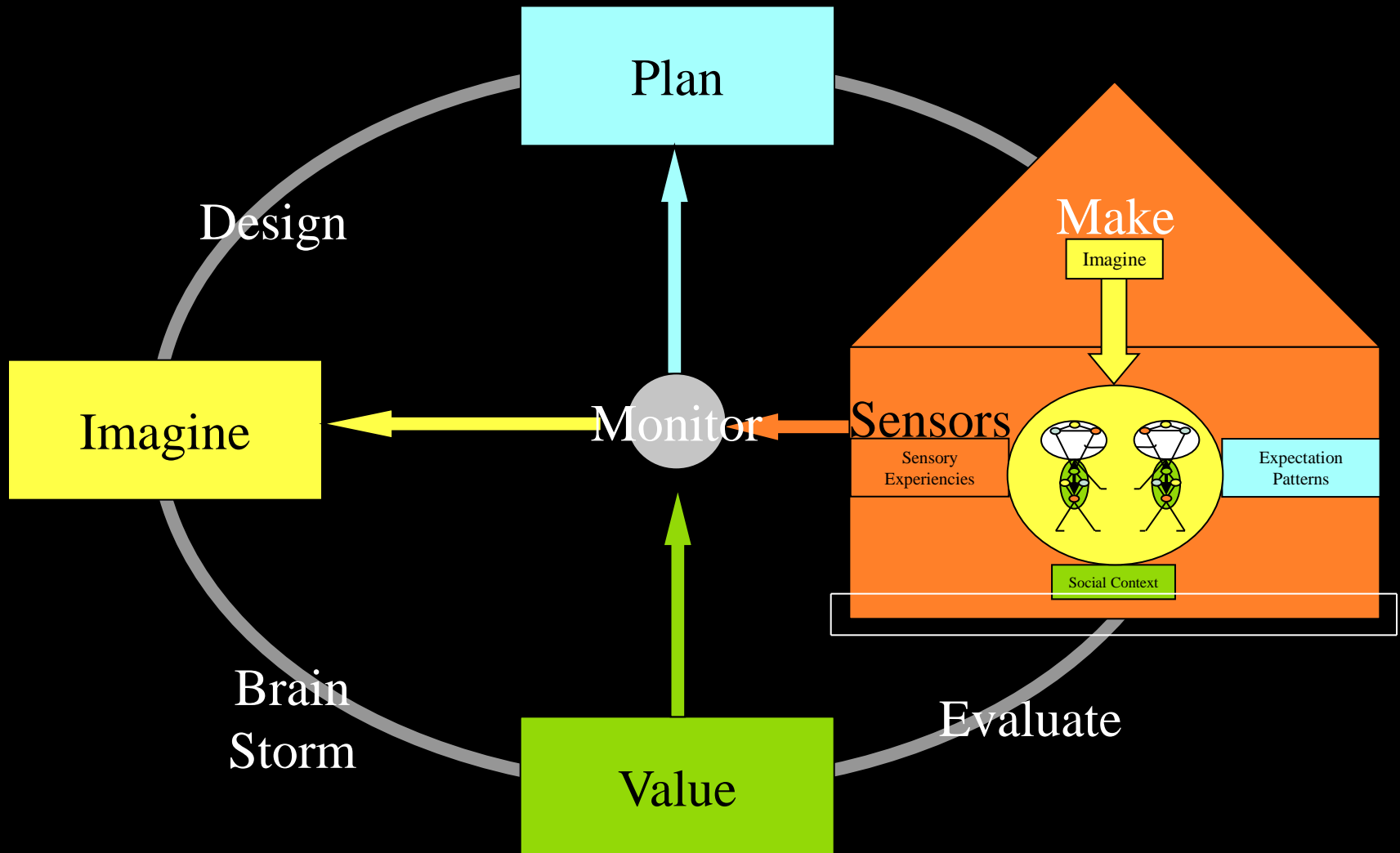


Just as the Skin A House Protects the Body  
Against Extreme External Situations

A House contains the same Functions as the Body  
and brings The Mind to Rest

The Body changes in time so the House  
also has to change in time

# The DNA of the Building



To build a Flexible House we have to  
determinate the **DNA** of the House.

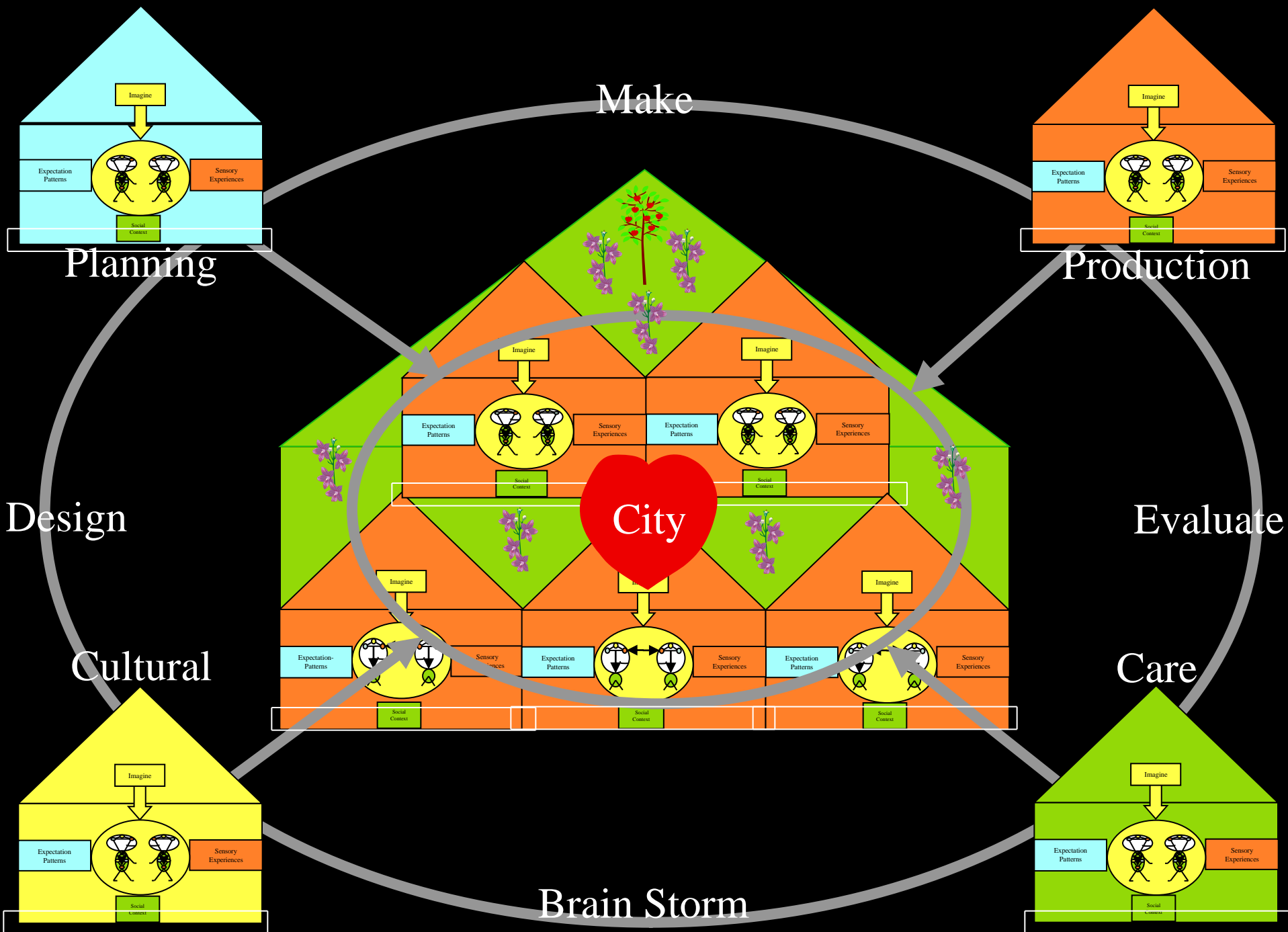
The Building Blocks have to be designed in a way that it is  
easy to put the House together. It must also be easy to take  
the House apart.

Now we can procede to the next Level, the City.

# City



The Medieval City protects the Houses.  
In the Center the House of the Heart is situated.





The different layers of the Town move  
with different Cycle Times.

If we want to keep the City in Balance  
we have to Synchronize the Cycles.

How does this Happen?

# Synchronization



# Synchronization



When Humans Communicate from the Heart and are Focused on the Same Subject, they Always Synchronize.

To Synchronize a City the Inhabitants have to Focus on a  
Shared Goal and Communicate about this Goal.

That is Why the Coherence of the Social Network of the City  
is very Important.

One of the most Important Buildings in the City to  
Commune is the **Cultural Center** (or the Church).  
It has to be situated in the Heart of the City.

# Culture Unites

