

# **An Introduction to Managerial Cybernetics**

# What is Cybernetics?

**“Control and Communication in the Animal and the Machine”  
(Norbert Wiener, 1947)**

## **What is *Managerial* Cybernetics?**

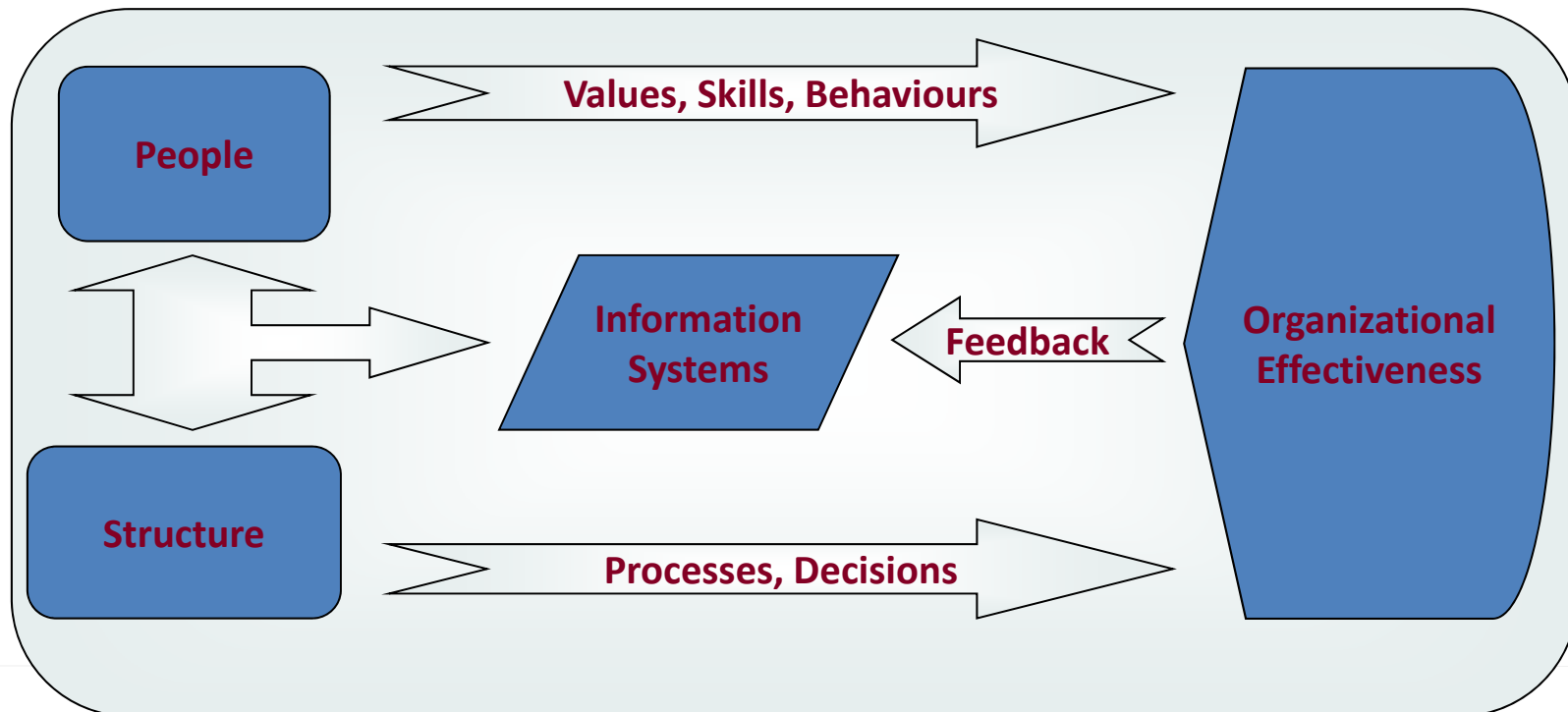
**“The science of effective organization” (Stafford Beer, 1959)**

## **What is *Managerial* Cybernetics for integra?**

**“The branch of management science that studies the structural, informational and human aspects of any organization as an integrated whole”**

**Beckford & Dudley, 1998**

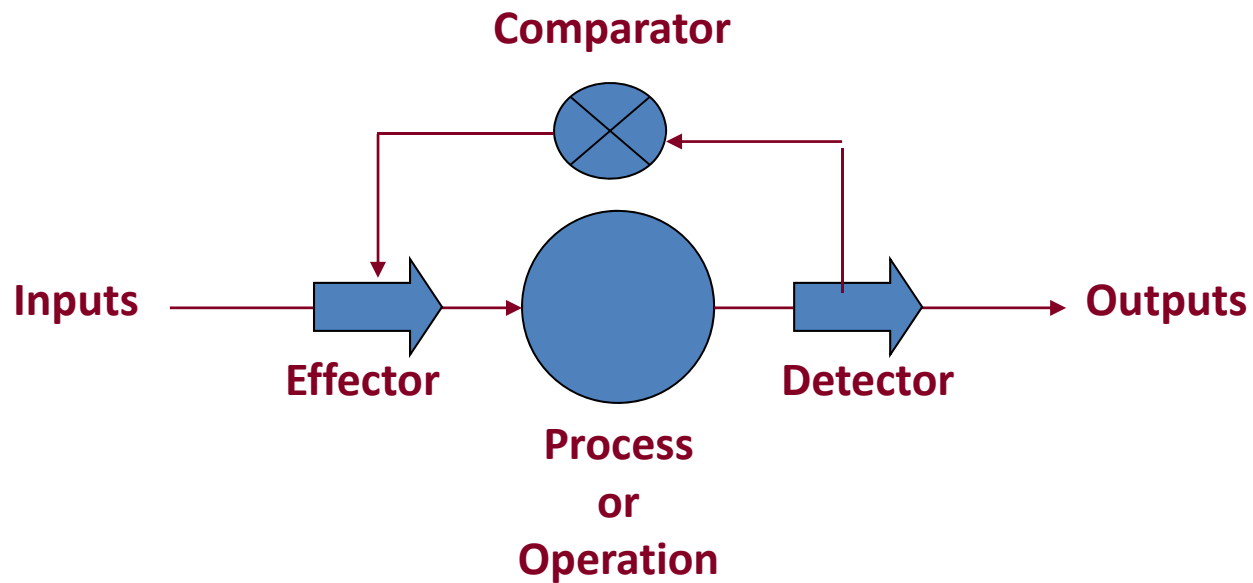
- Studies organizations as whole systems
- Actively seeks to release human potential
- Enables real-time performance management
- Drives sustainable organizational effectiveness



Addresses this fundamental question:

- How can any organization become more successful by making better use of all resources through?
  - structural innovation
  - redesigning processes
  - utilising knowledge and skills
  - reducing bureaucracy
  - improving use of information
  - improving decision making
  - managing performance

# The Basic Cybernetic Model



Complexity in the organizational environment  
in the organization itself  
in behaviour of customers and employees

Adaptation the ability to change  
the need for control  
the need for organizational learning

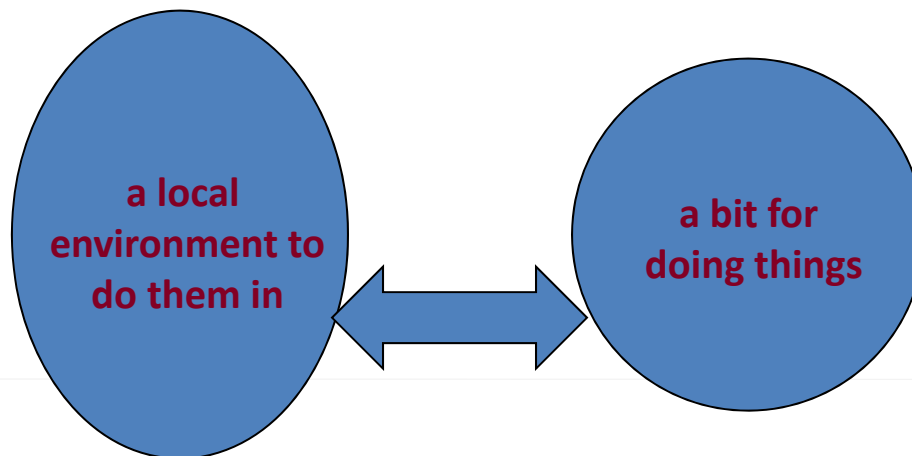
Structure the processes  
the people  
the information  
the interactions which lead to decisions

**A Cybernetic organization has:**

A blue circle with a thin black outline, containing the text 'a bit for doing things' in a dark red, sans-serif font.

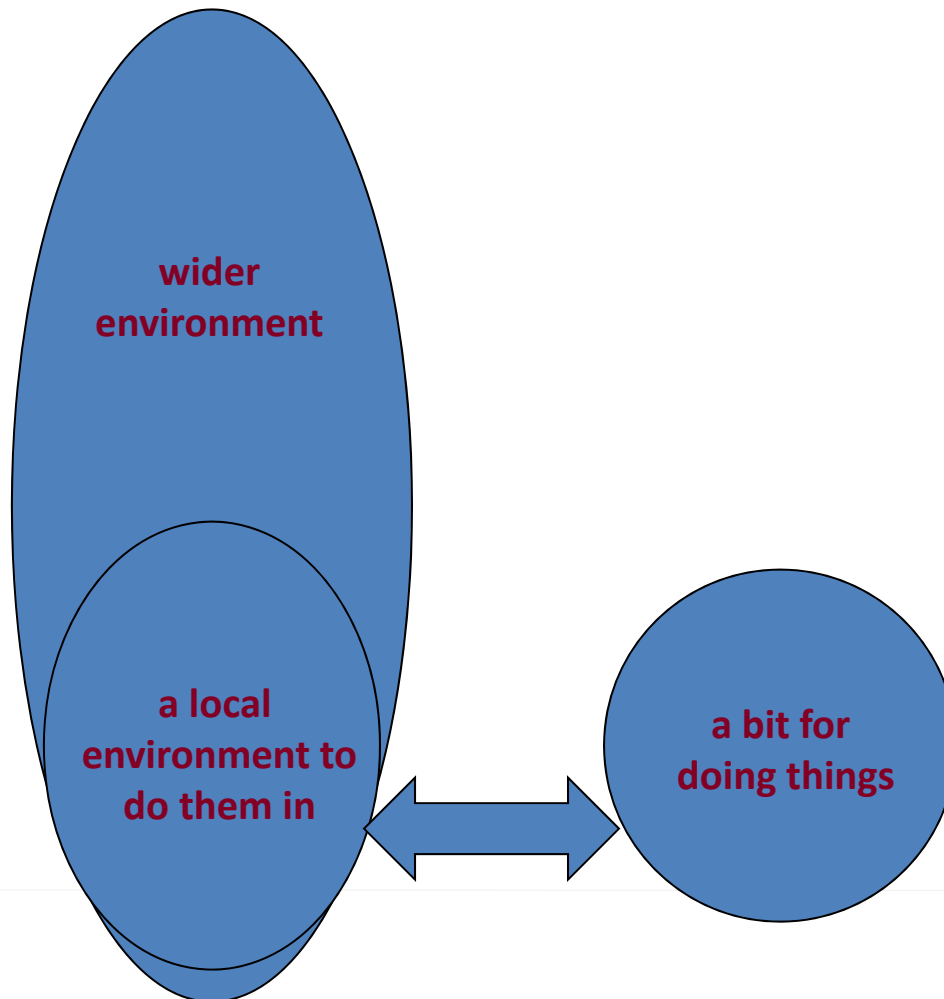
**a bit for  
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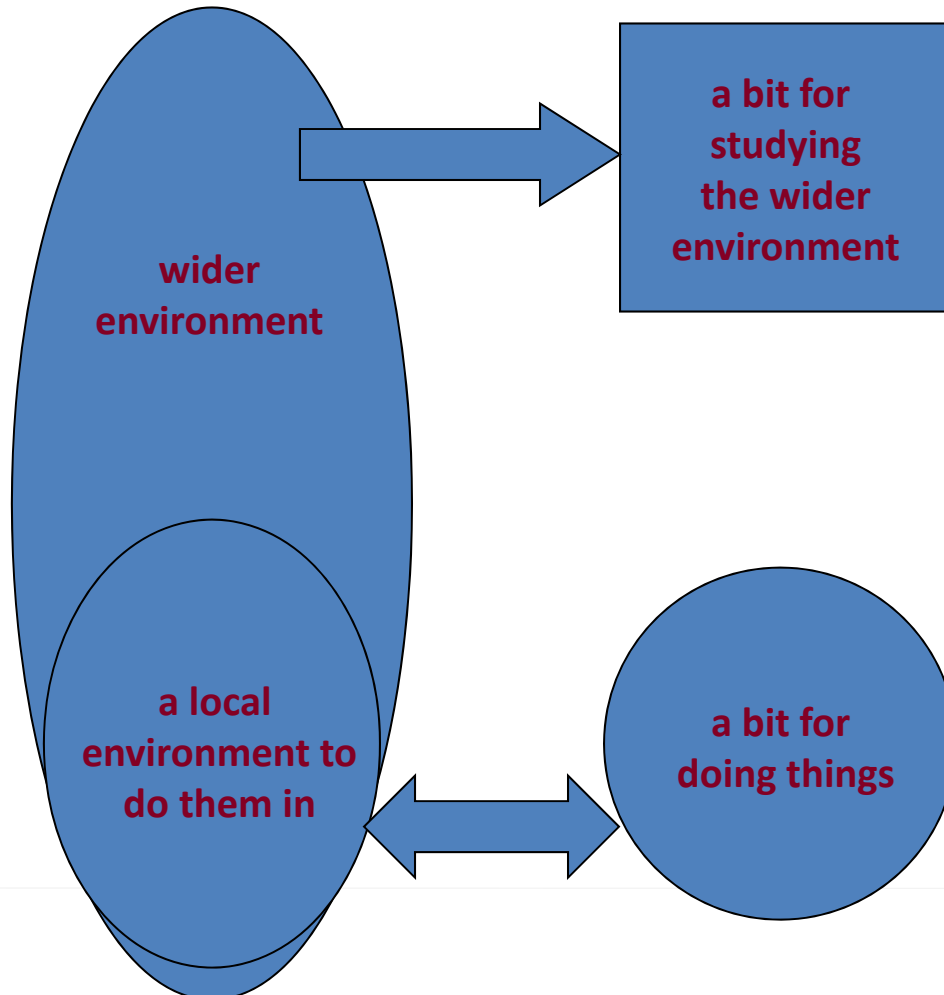




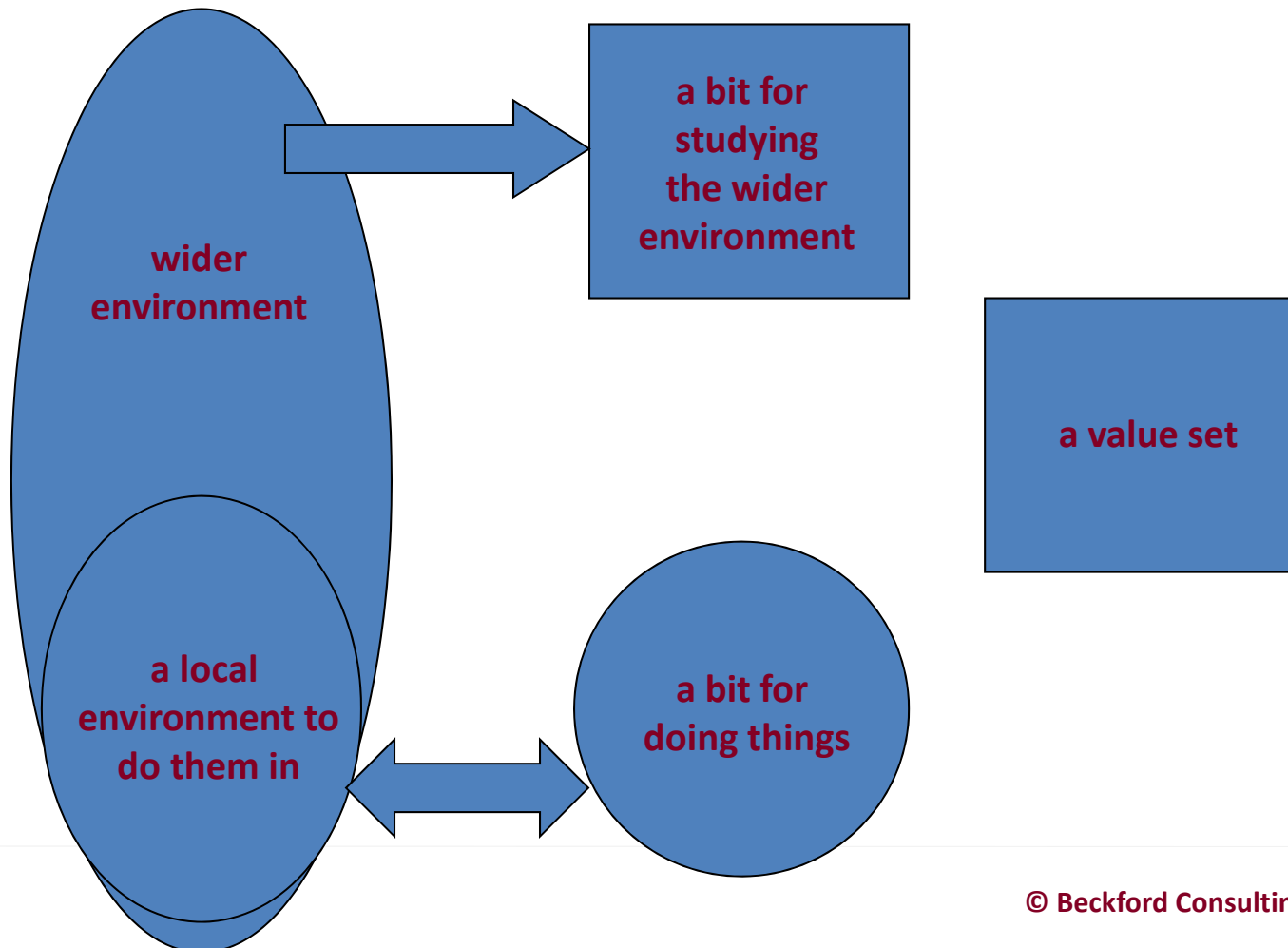
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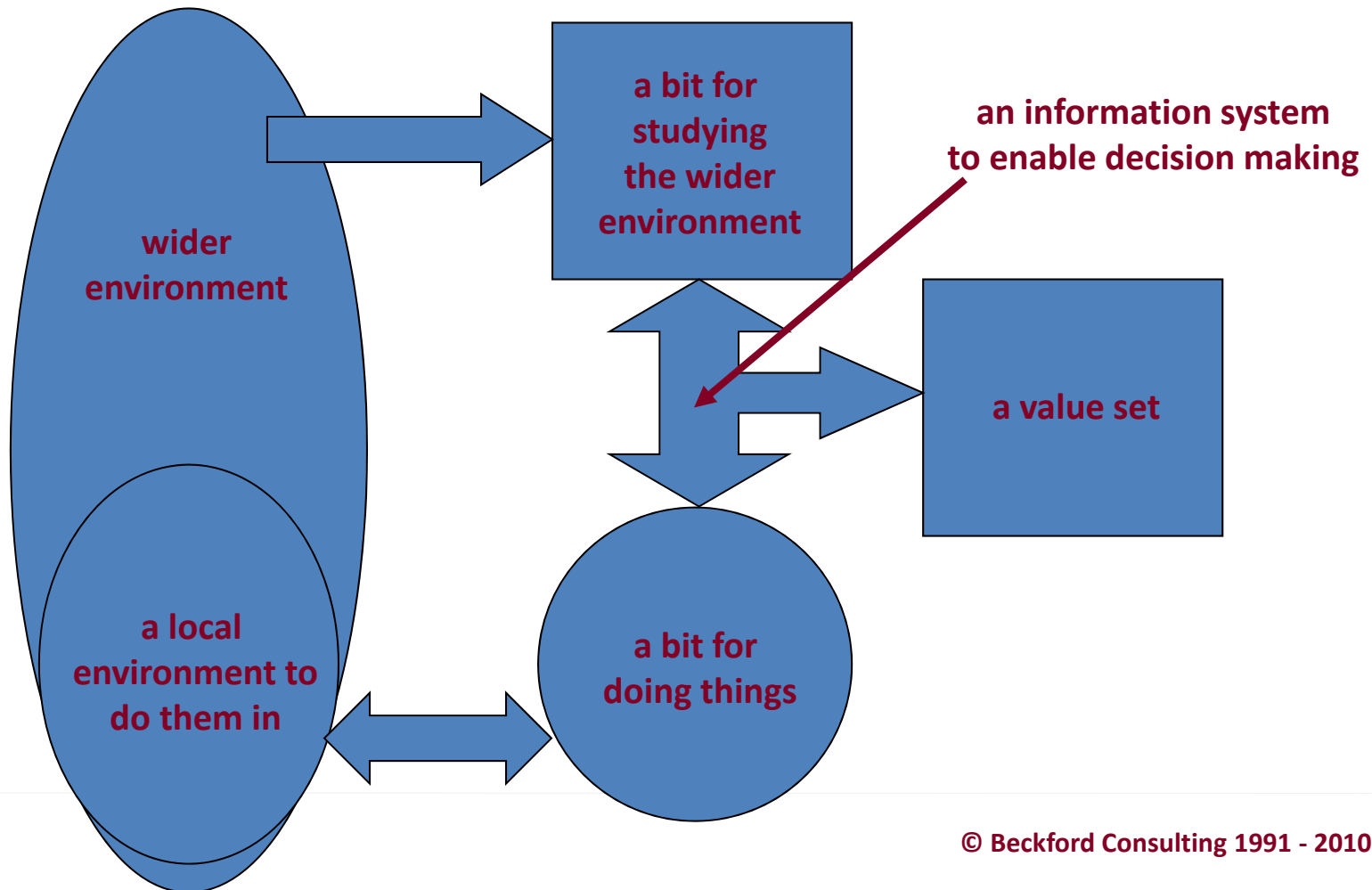
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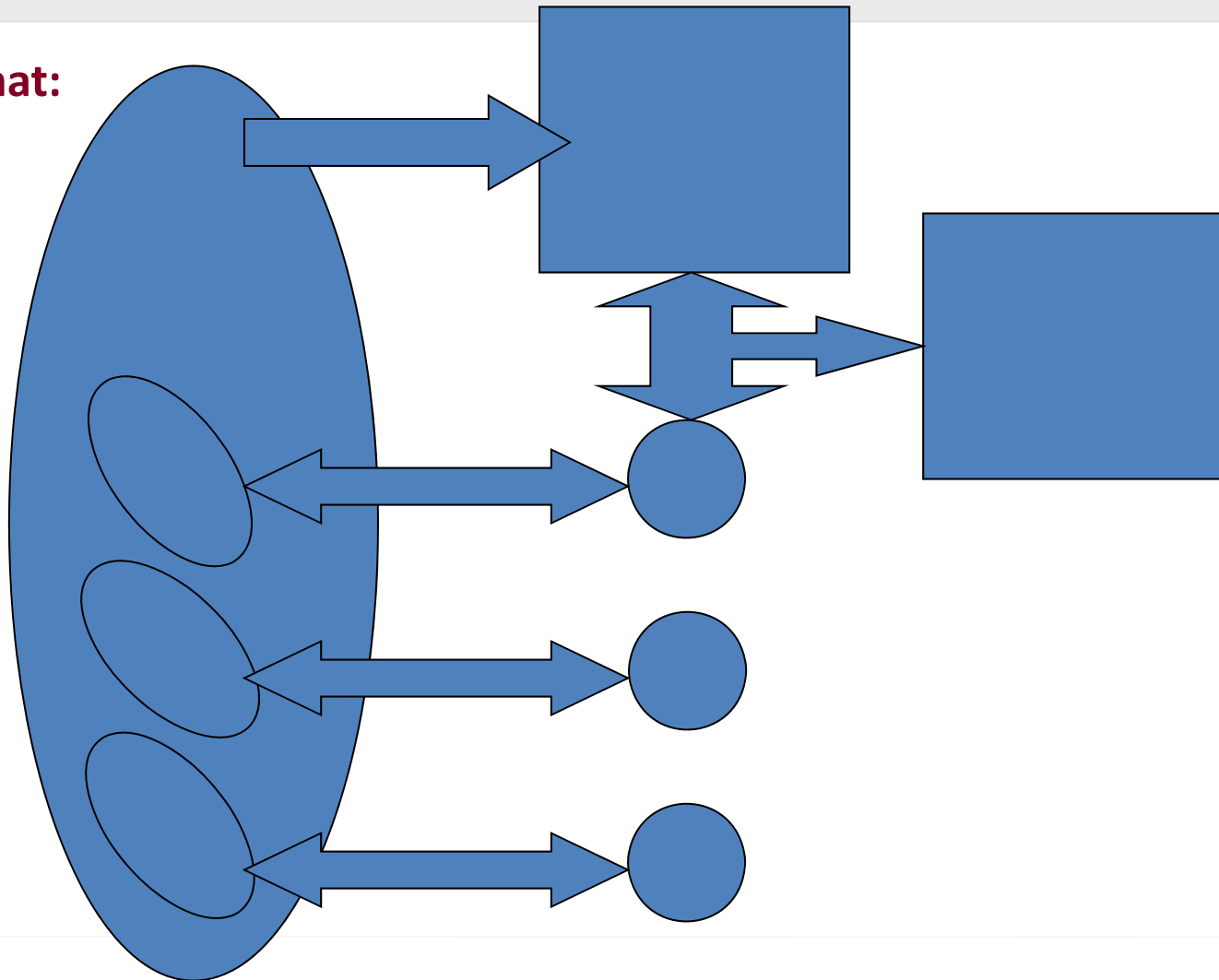
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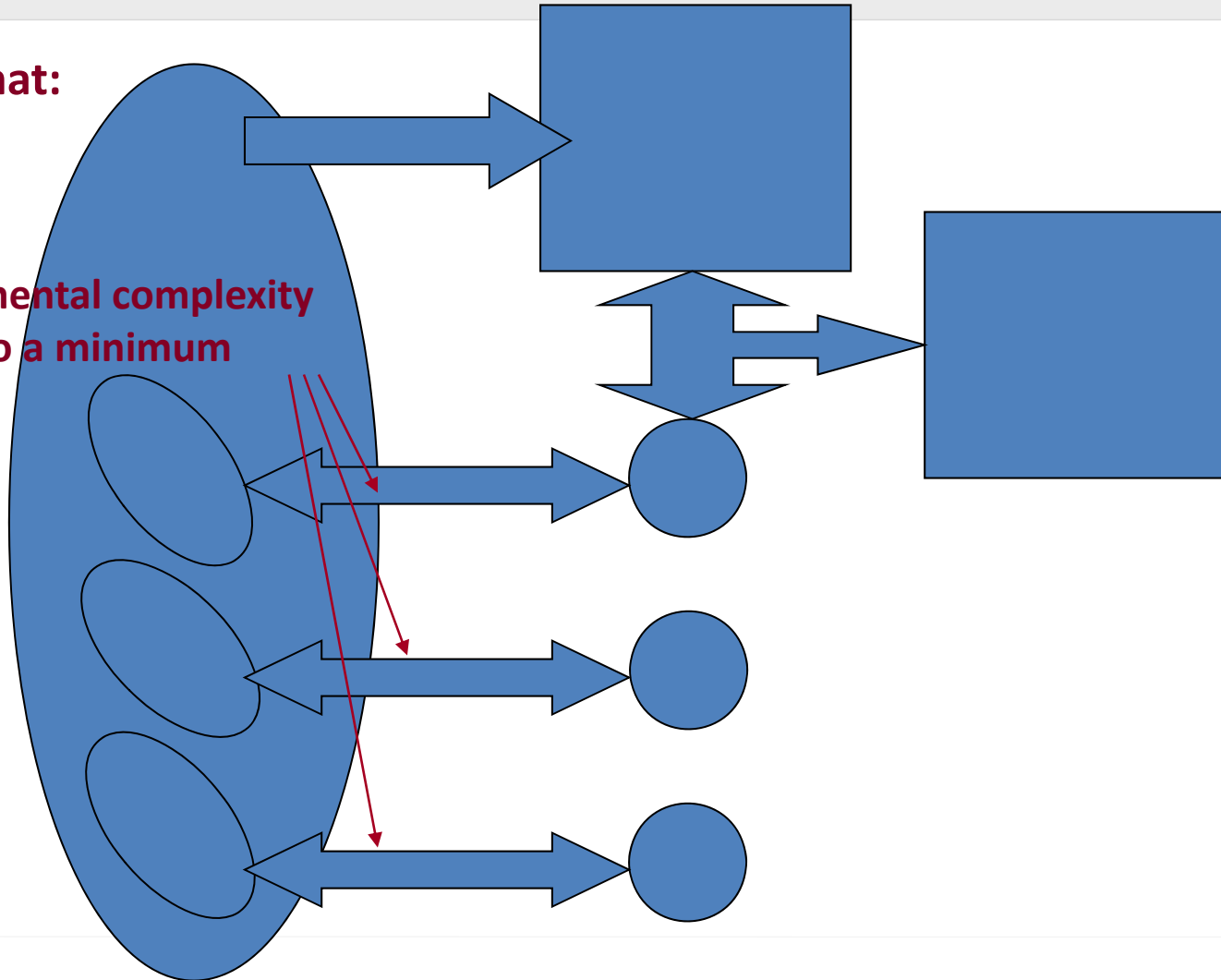


In order that:



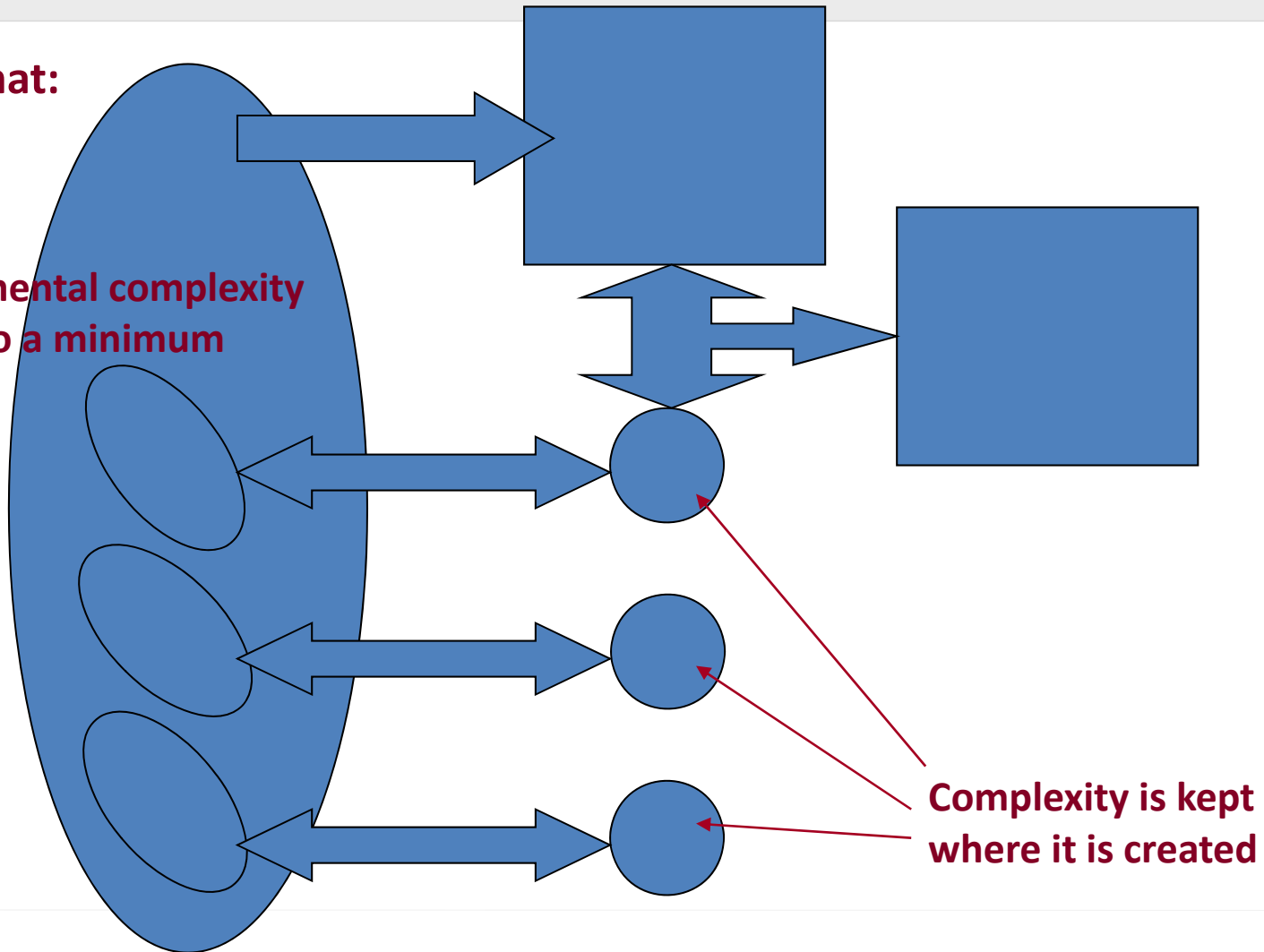
In order that:

Environmental complexity  
is kept to a minimum



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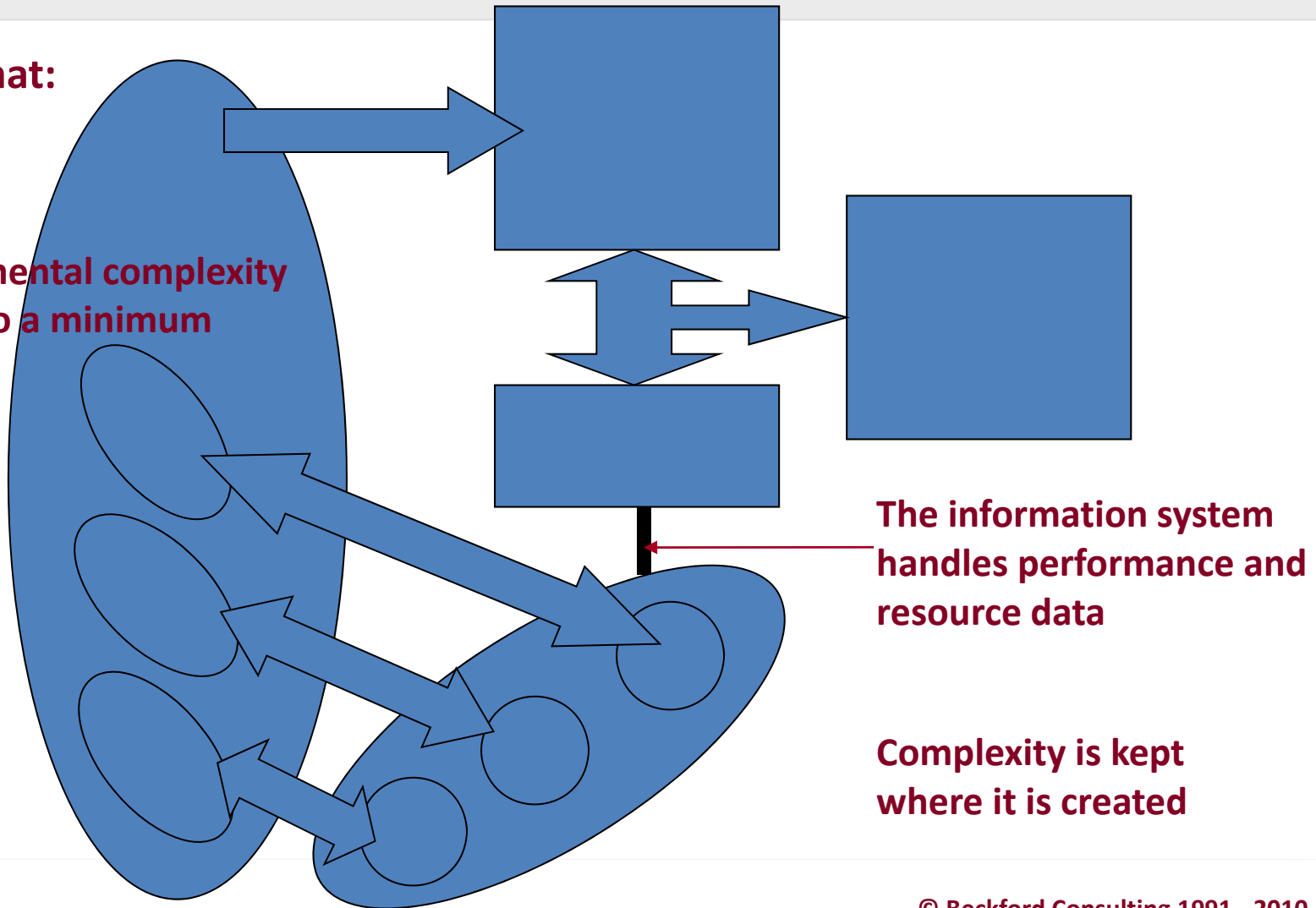
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Complexity is kept  
where it is created

In order that:

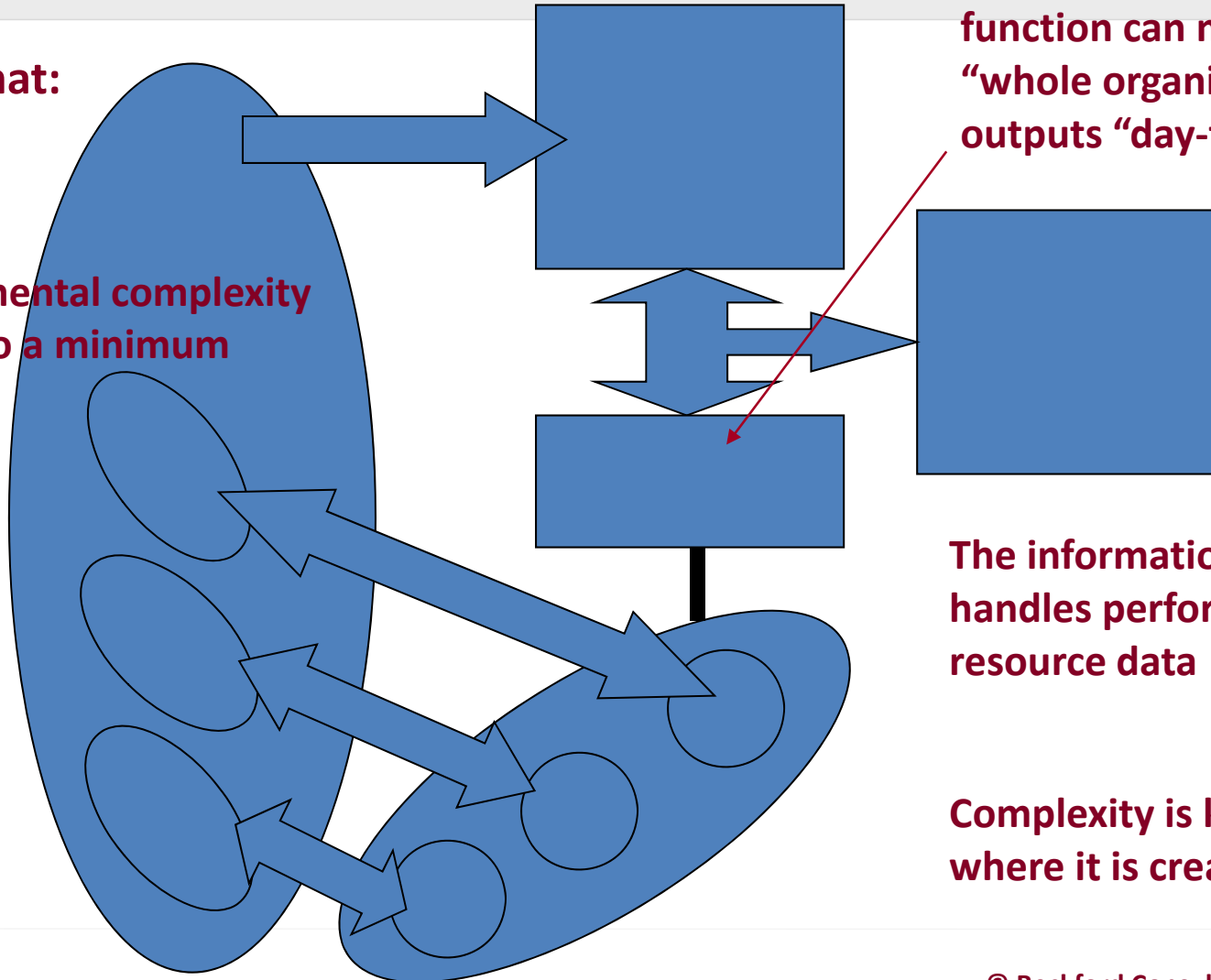
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Which means that this  
function can manage  
“whole organization”  
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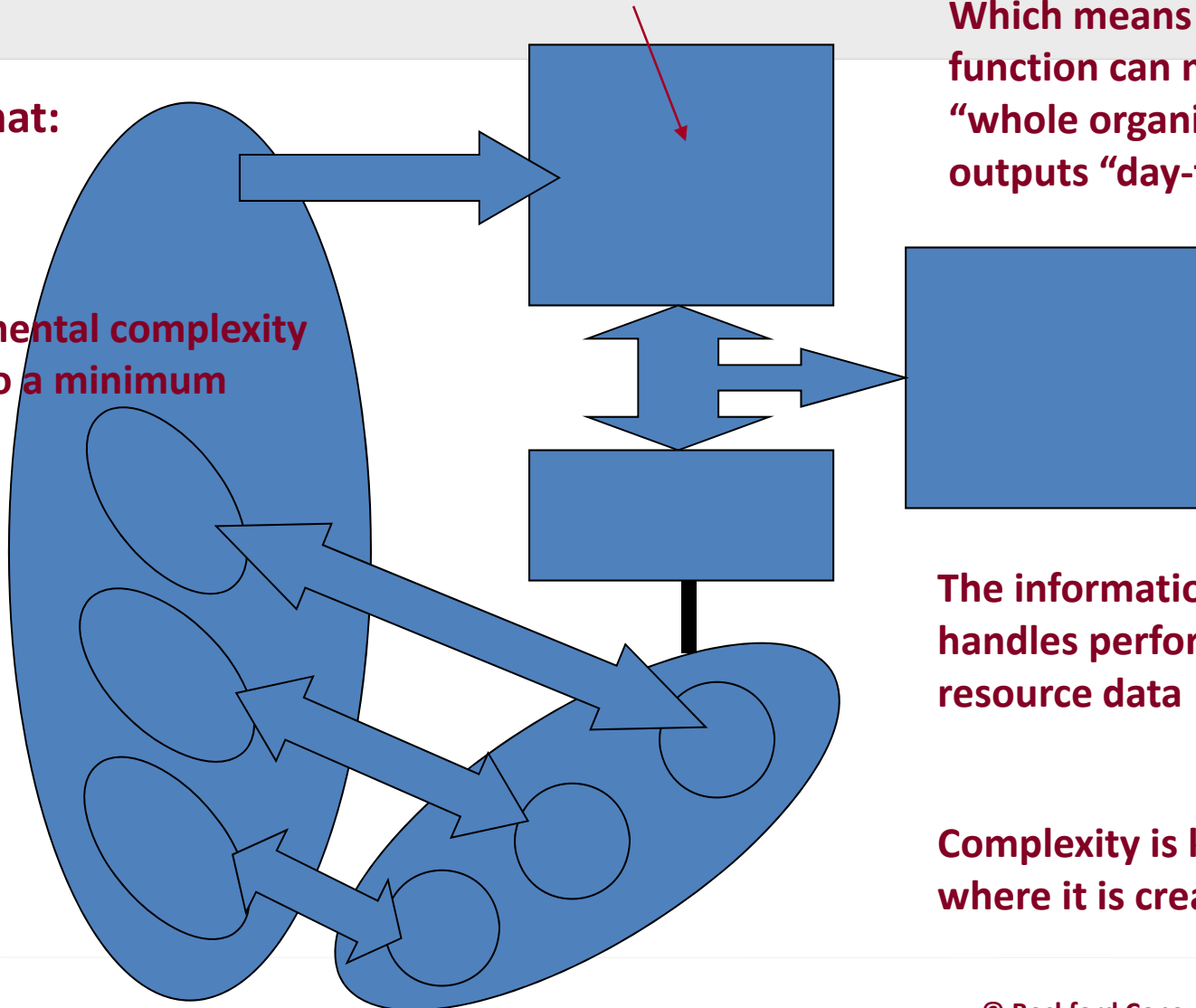
The information system  
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Complexity is kept  
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This function analyzes the effect of the wider environment on the organization as a whole

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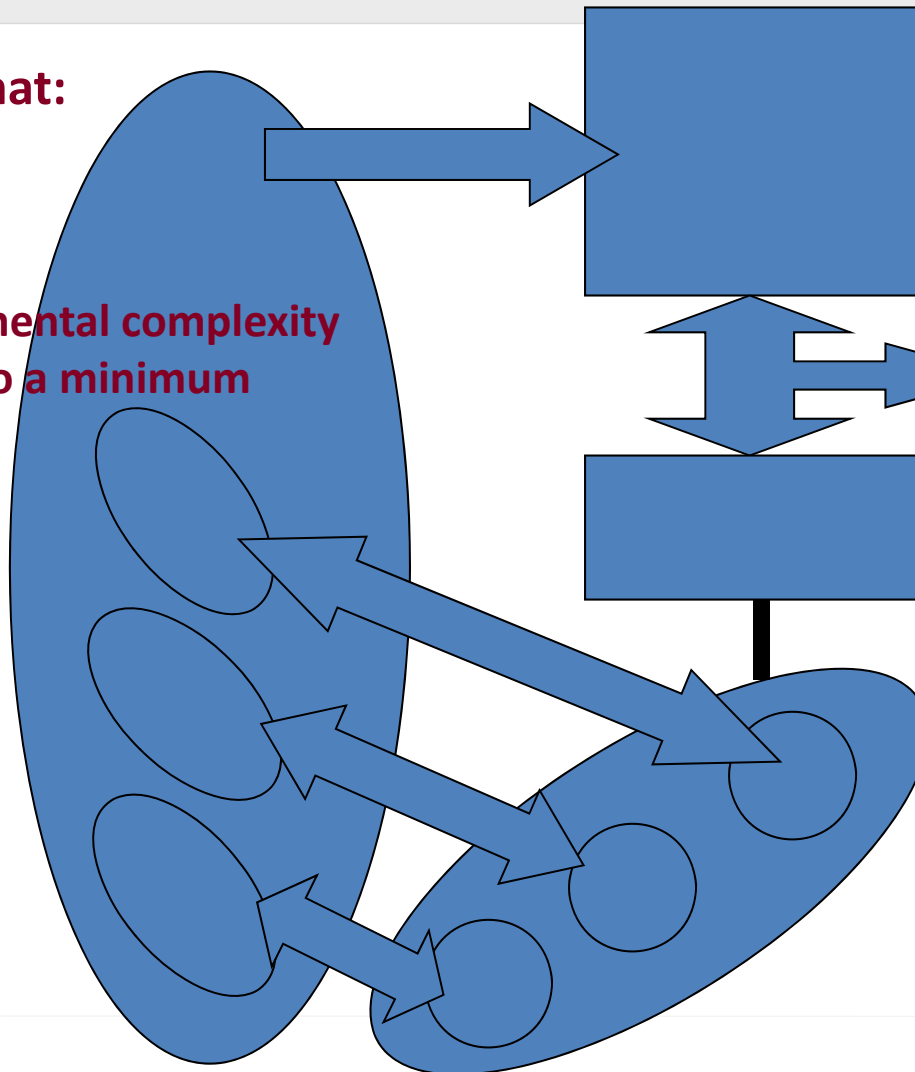
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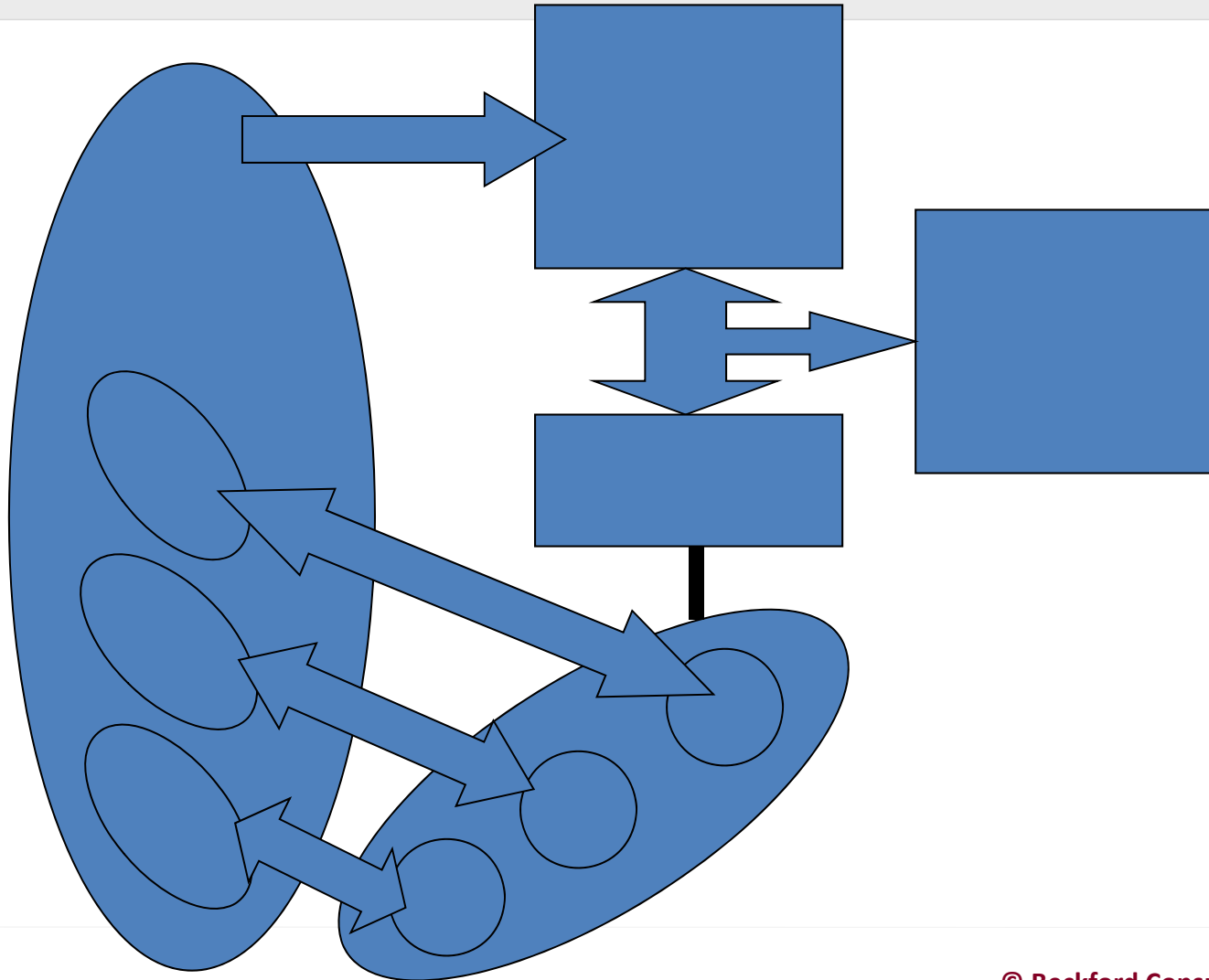


And this function holds the value set

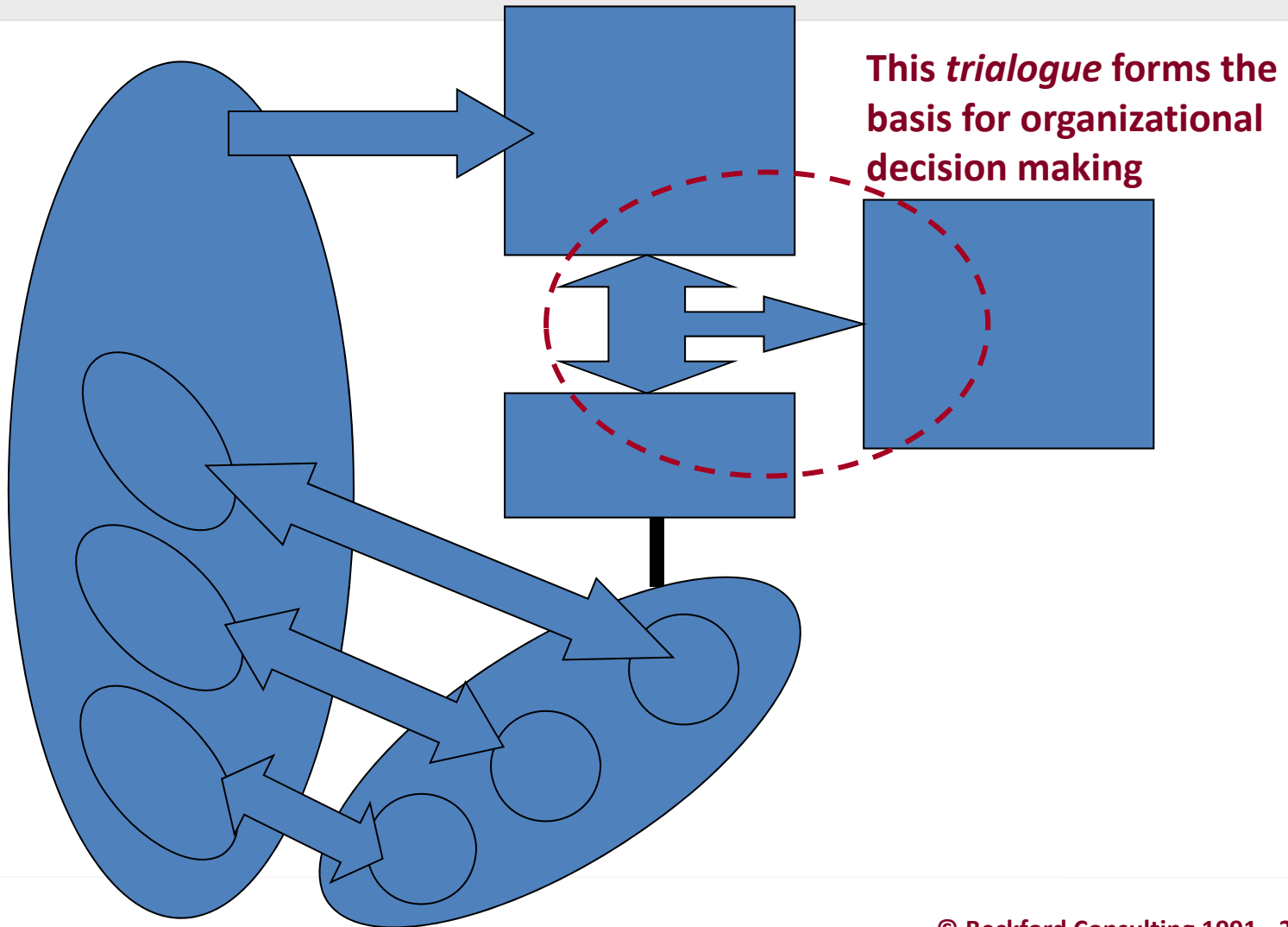
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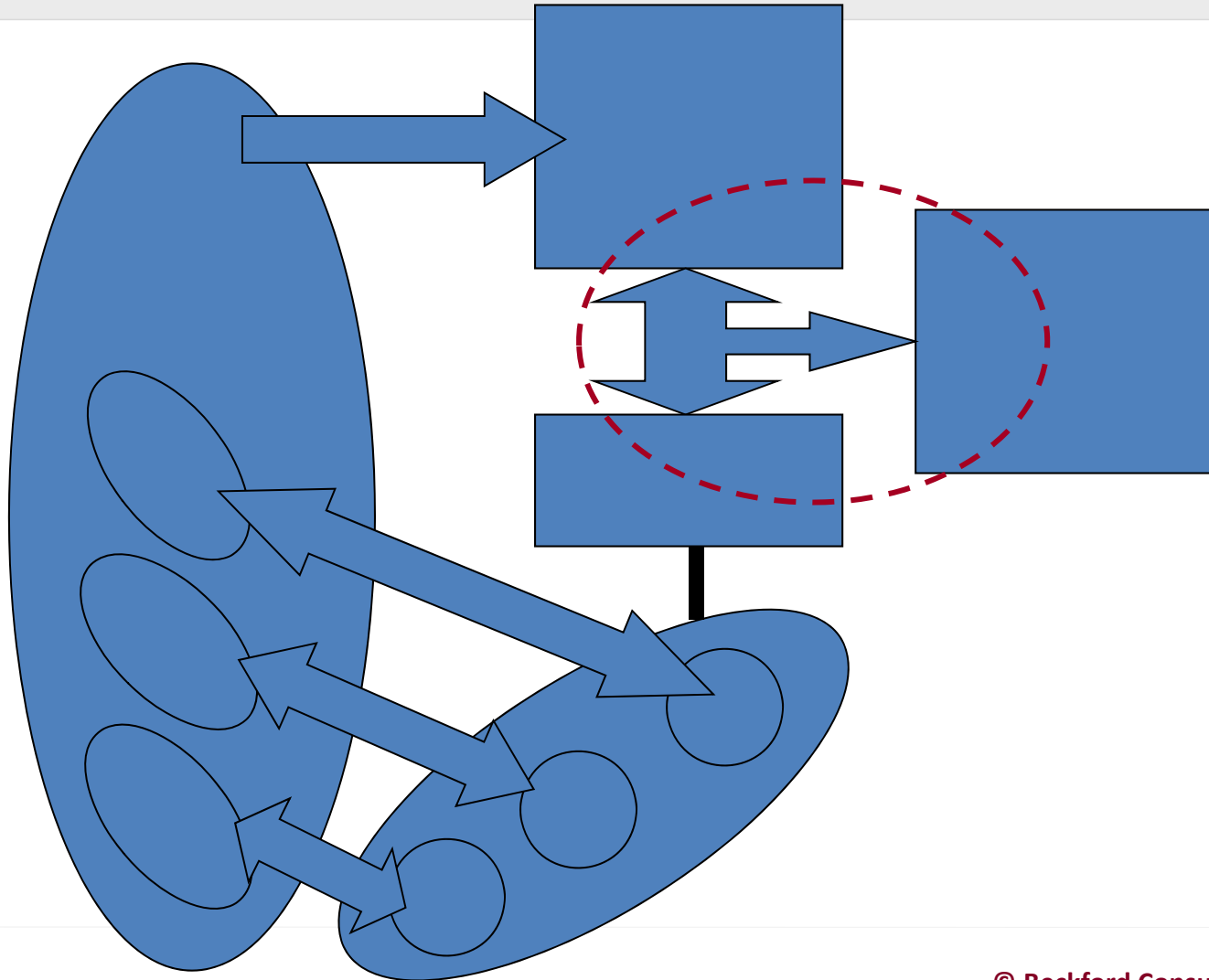
So that:



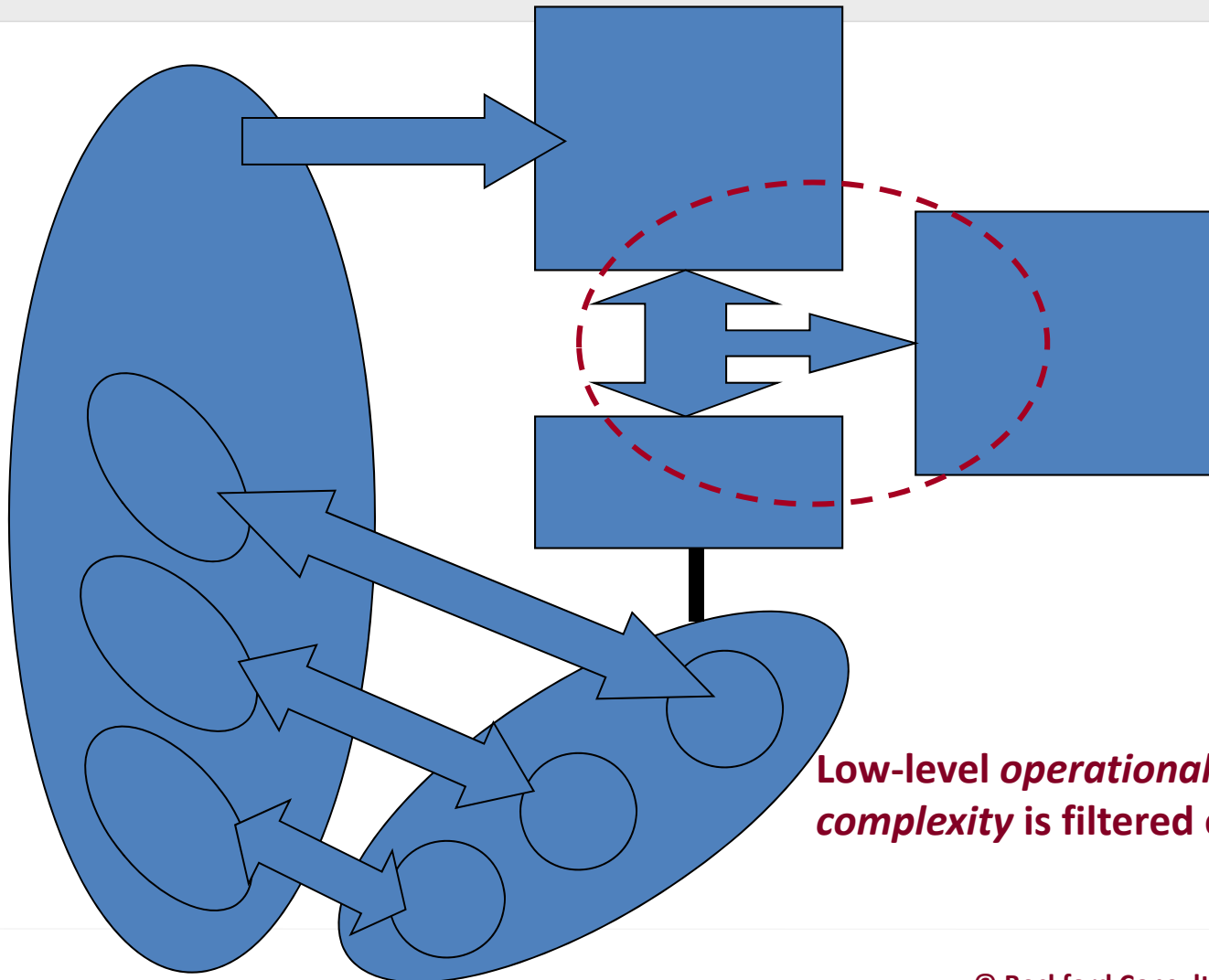
So that:



Because:



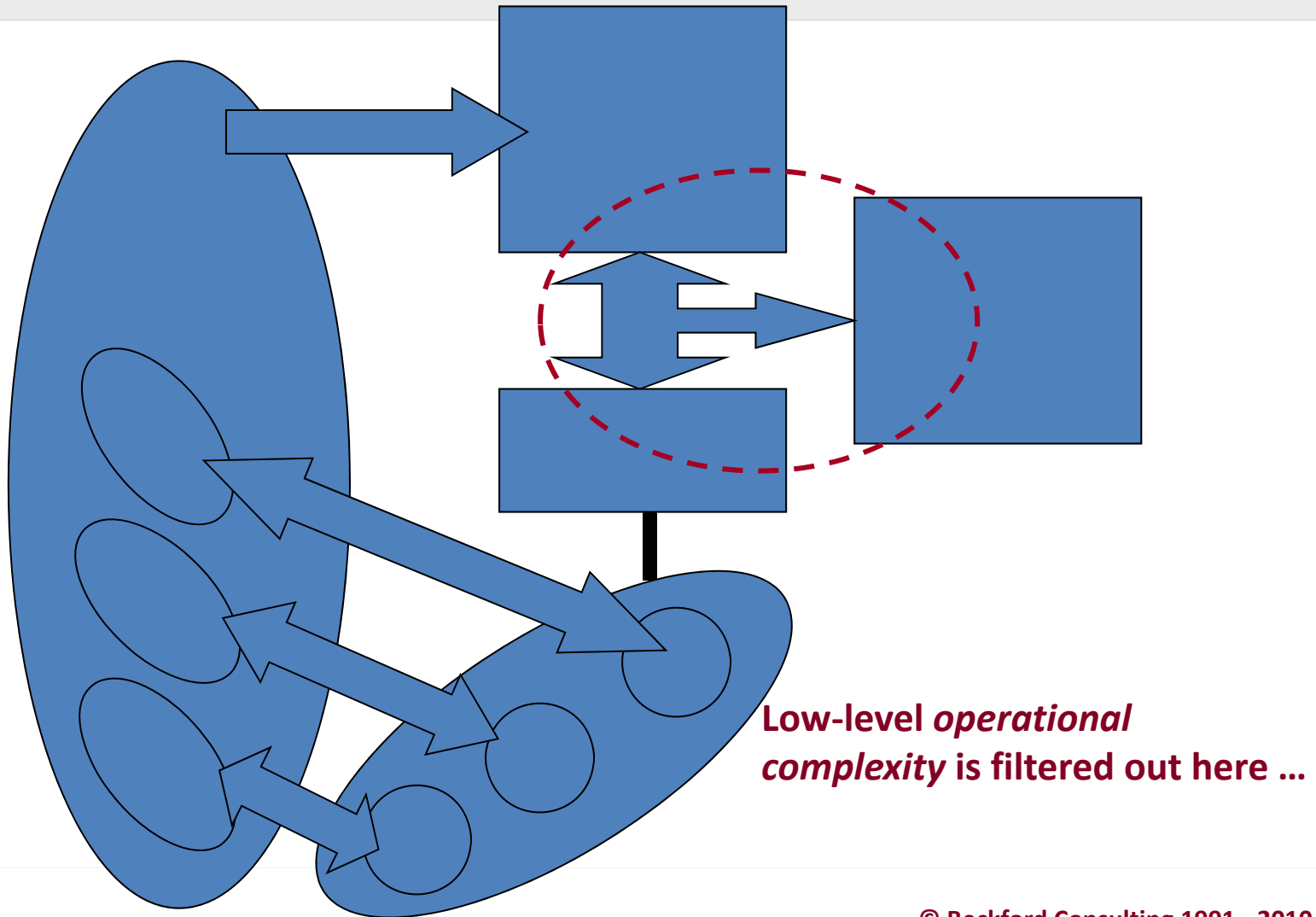
Because:



*Low-level operational complexity is filtered out here ...*

**Irrelevant *environmental complexity* is filtered out here ...**

**Because:**





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