

Activity Modalities

An action perspective based on innate coordination capabilities

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In order to act we must be

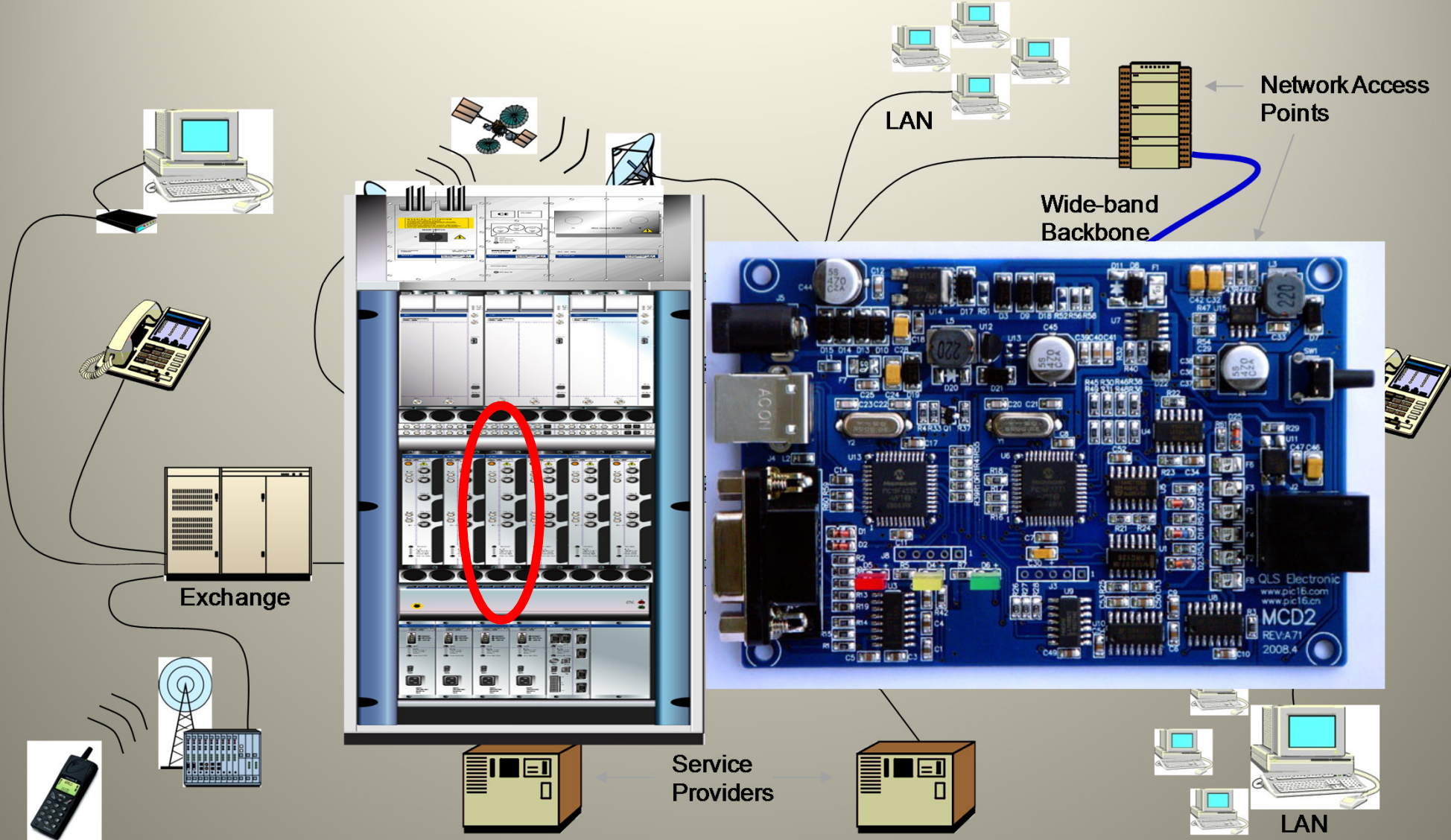
- be motivated by some need,
- focus our attention on some object,
- devise a context of relevance around the object,
- orient ourselves in the context,
- conceptualize a sequence of actions towards the object,
- distinguish appropriate actions from inappropriate ones,
- and change context when something else is in focus

This is basically what the activity modalities are all about!

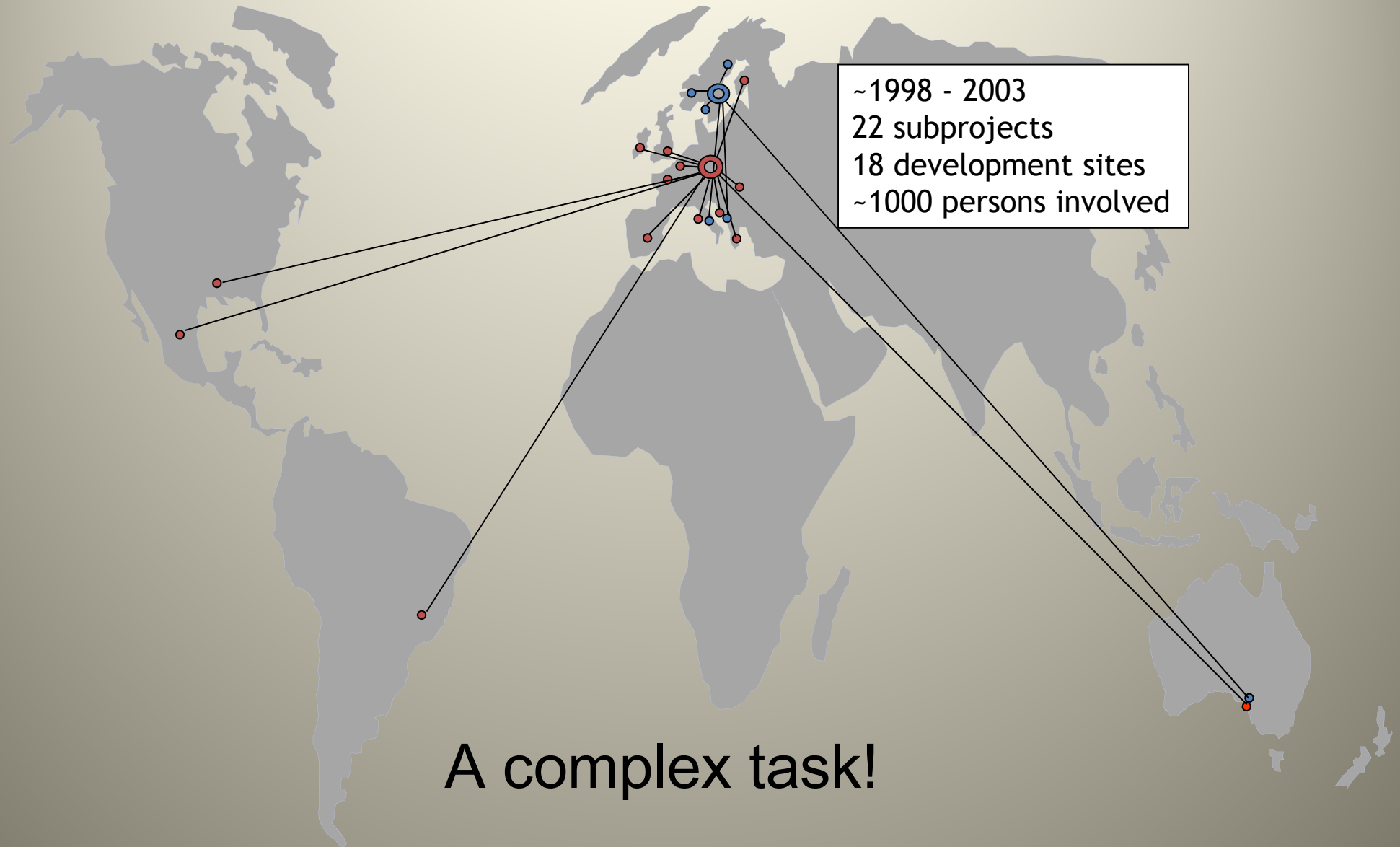
The telecom industry

- where it all started

The telecom network



Coordinating the development of the 3G mobile systems

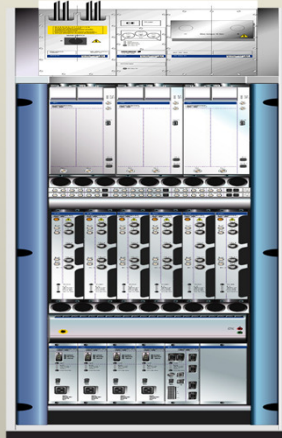


A complex task!

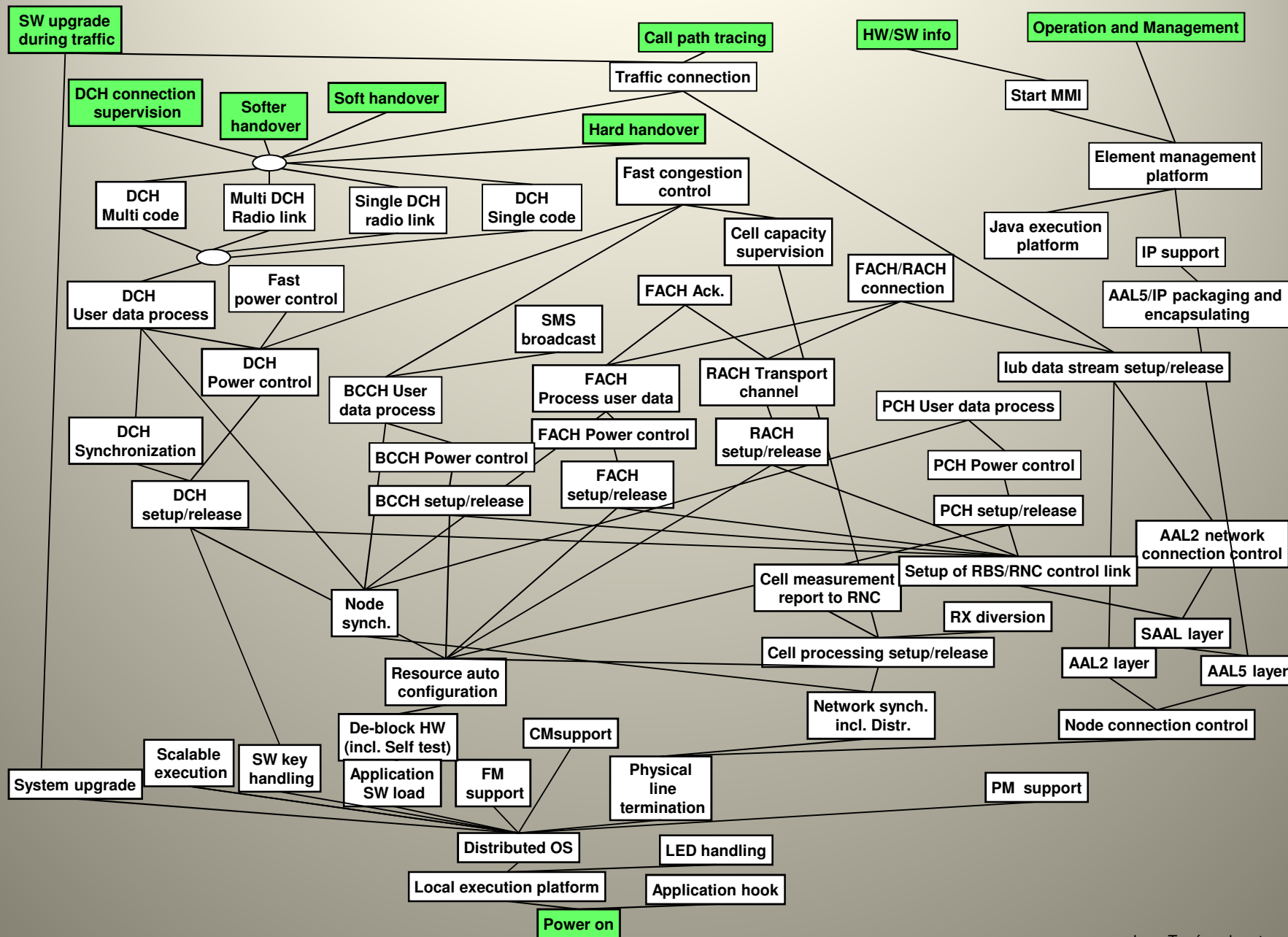
Lessons from practice –

What does it take to coordinate the development of a complex system?

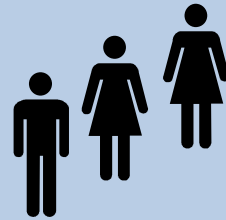
Focusing on an object, driven by some motive



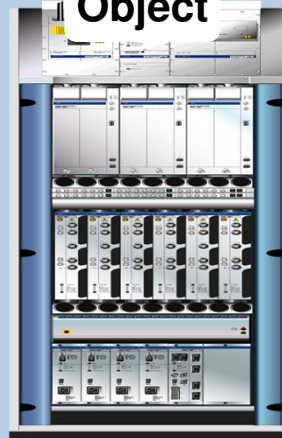
Working out a model of the object



Forming a context of relevance around the object

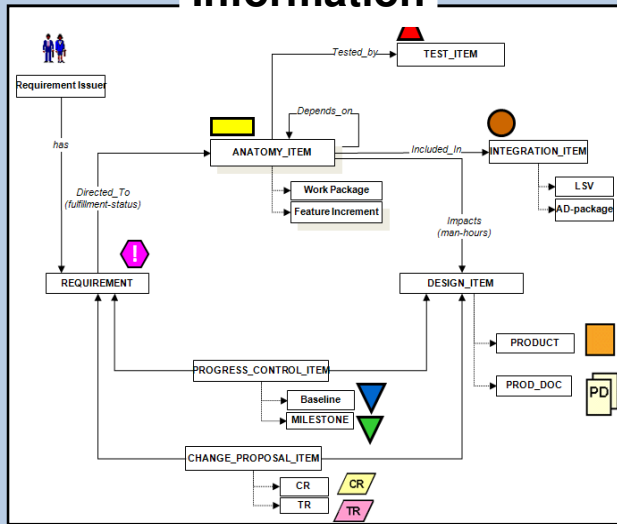


Object



Forming a context of relevance around the object

Information



People



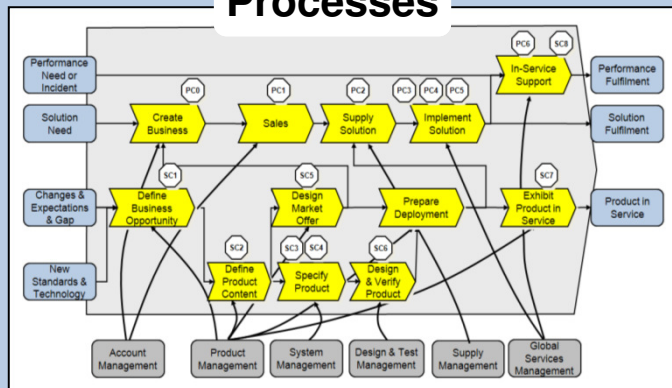
Object



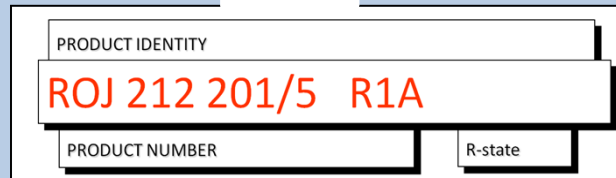
Tools

Object	State	Owner	Revision
Work Package WP1	RFSy	uablx	-
Source Program Information 190 55 190 55-CAAZ 107 3937 PB1	CHKD	uablx	PB1
Source Program Information 190 55 190 55-CAAZ 107 9577 PC2	PREL	uablx	PC2
Block (CNT) A R1	PREL	uablx	R1
Block (CNT) B R1	PREL	uablx	R1
Increment Milestone WP1 MS3 A	Not Passed	uablx	A
LSV A P1A	PREL	uablx	P1A
Work Package WP2	IND	uablx	-
Detailed Req C-100 A	AGREED	uabesen	A

Processes



Rules

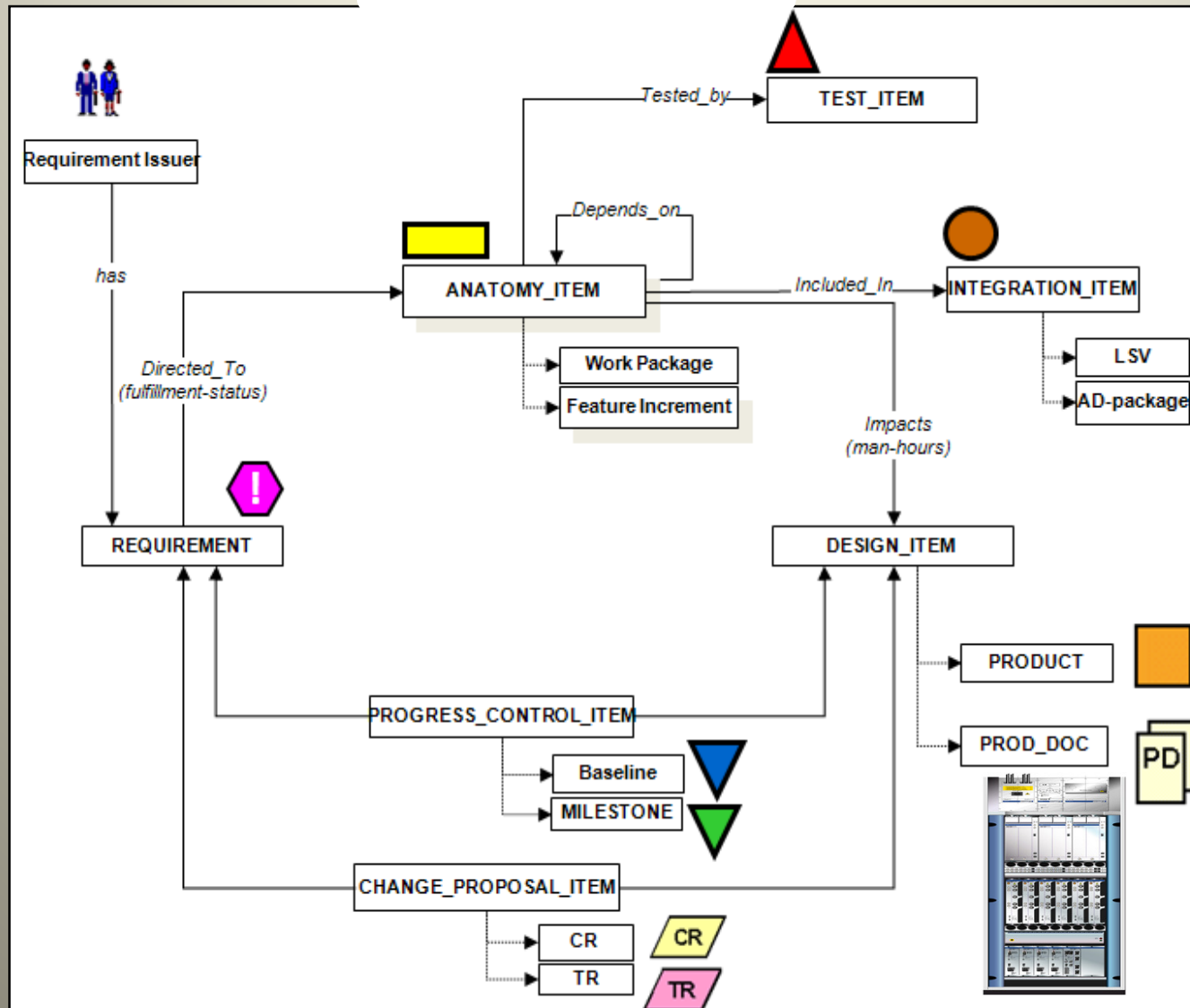


Organizational units



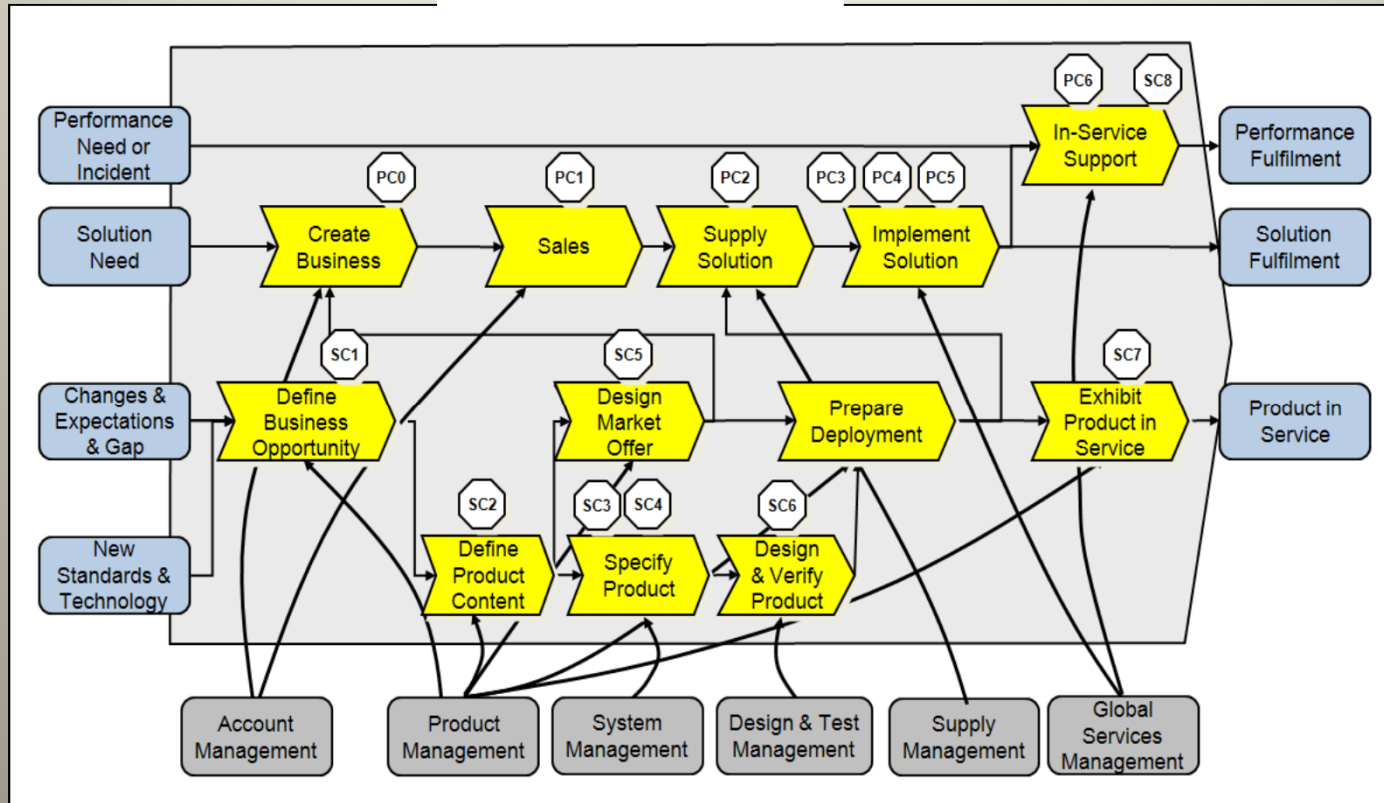
Working out a “map” of relevant things

Information model



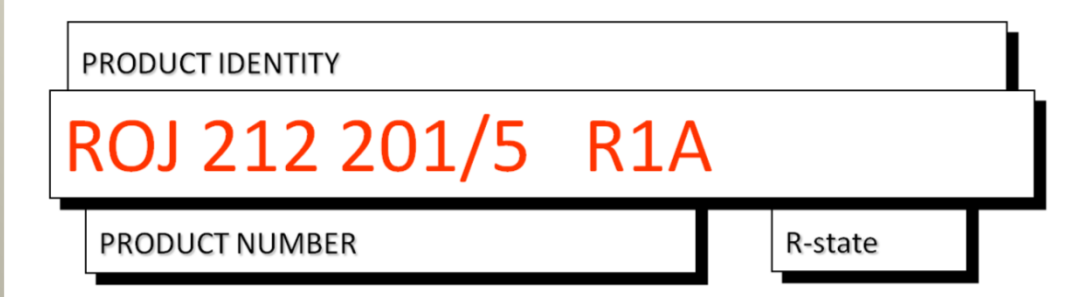
Working out a sequence of actions

Process model



Adhering to correct ways of working

Rules, norms, standards



Making use of tools

Information systems

The screenshot shows a software application window with a menu bar (Object, Edit, View, Properties, Files, Relationships) and a toolbar. Below the toolbar is a dropdown menu set to '<Personal>' and another set to 'REQUIREMENT_INCREM'. The main area displays a tree view of objects under 'Impacts'. An inset window shows a server rack.

Object	State	Owner	Revision
Work Package WP1	RFSy	uabltx	-
Source Program Information 190 55 190 55-CAAZ 107 3937 PB1	CHKD	uabltx	PB1
Source Program Information 190 55 190 55-CAAZ 107 5577 PC2	PREL	uabltx	PC2
Block (CNT) A R1	REL	uabltx	R1
Block (CNT) B R1	REL	uabltx	R1
Increment Mileston WP1-MS8 A	Not Passed	uabltx	A
LSV A P1A	PREL	uabltx	P1A
Work Package WP2	IND	uabltx	-
Detailed Req C-100 A	AGREED	uabesen	A

Working out an “actionable” common understanding

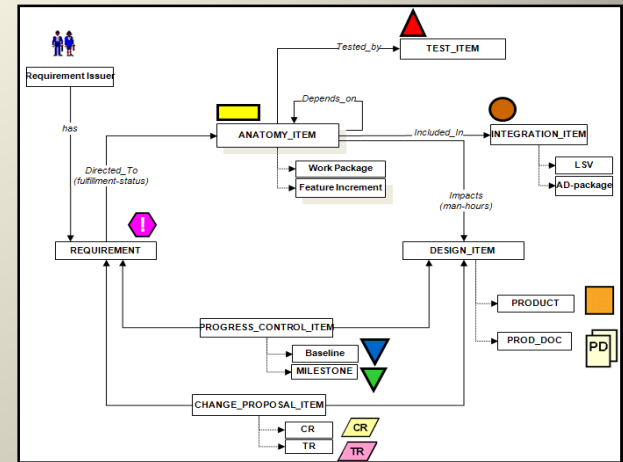
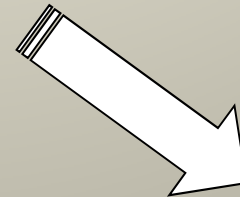
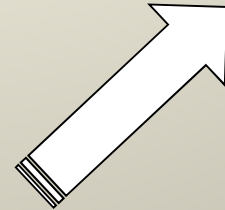
Communal meaning



Acquiring capabilities for action

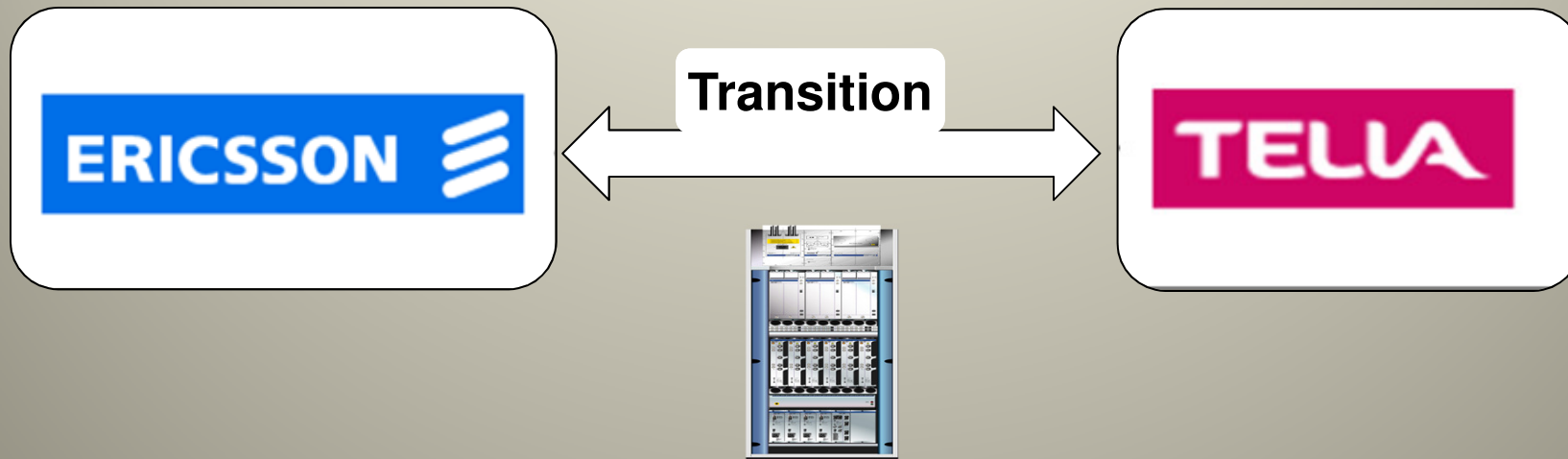


Enactment



Object	State	Owner	Revision
Work Package WP1	RFSy	uablx	.
Source Program Information 190 55 190 55 CAAZ 107 3937 PB1	CHKD	uablx	PB1
Source Program Information 190 55 190 55 CAAZ 107 5577 PC2	PREL	uablx	PC2
Block (CNT) R1	PREL	uablx	R1
Block (CNT) B R1	PREL	uablx	R1
Increment Milestone WP1.MS8 A	Not Passed	uablx	A
LSV A P1A	PREL	uablx	P1A
Work Package WP2	IND	uablx	.
Detailed Req C-100 A	AGREED	uaberen	A

Establishing organizational cooperations



How to make sense of this?

- a conjecture

Point of departure - Coordination



**Coordination is at the core of human action
- spans both the neural and social realms**

1st premise

**The architecture of the brain
constrains and enables the construction
of purposeful artifacts (e.g. ISs)**

Physical enabling and constraining artifacts



Giant chairs or mini-horses?

Thus

**Our artifacts tells us something about the
architecture of our bodies and brains**

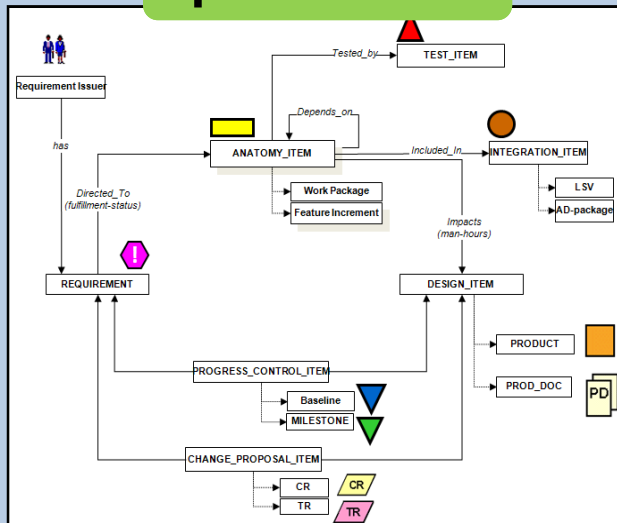
2nd premise

Humans are endowed with innate predispositions for coordinating actions – the Activity Modalities

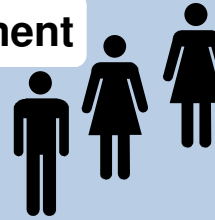
The activity modalities

Contextualization

Spatialization

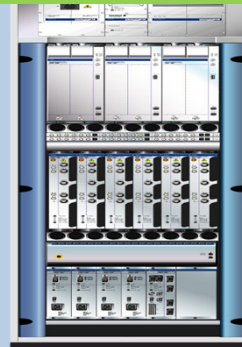


Enactment



Communal meaning

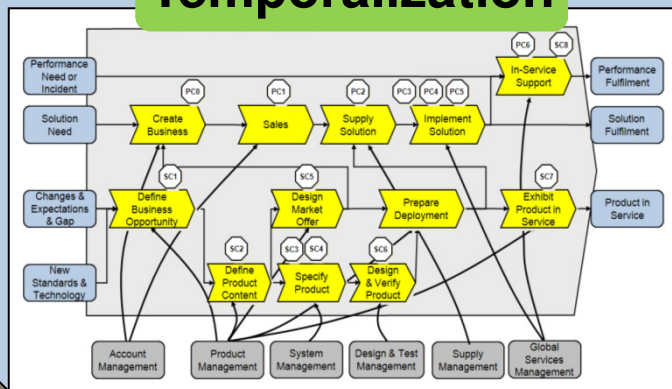
Object orientation



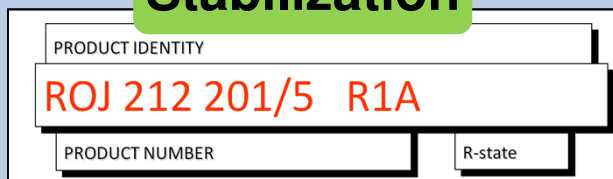
Mediational means

Object	State	Owner	Revision
Work Package WP1	RFSy	uablx	-
Source Program Information 190 55 190 55-CAAZ 107 3937 FB1	CHKD	uablx	FB1
Source Program Information 190 55 190 55-CAAZ 107 5577 PC2	PREL	uablx	PC2
Block (CNT) A R1	PREL	uablx	R1
Block (CNT) B R1	PREL	uablx	R1
Increment Milestone WP1 MSB A	Not Passed	uablx	A
LSV A P1A	PREL	uablx	P1A
Work Package WP2	IND	uablx	-
Detailed Req C-100 A	AGREED	uabesen	A

Temporalization



Stabilization



Transition



Socially organized work- the Activity Domain

Attending an object, driven by some motive

Framing a context

Spatial orientation

Sequence of actions

Relevant actions

Mediational means

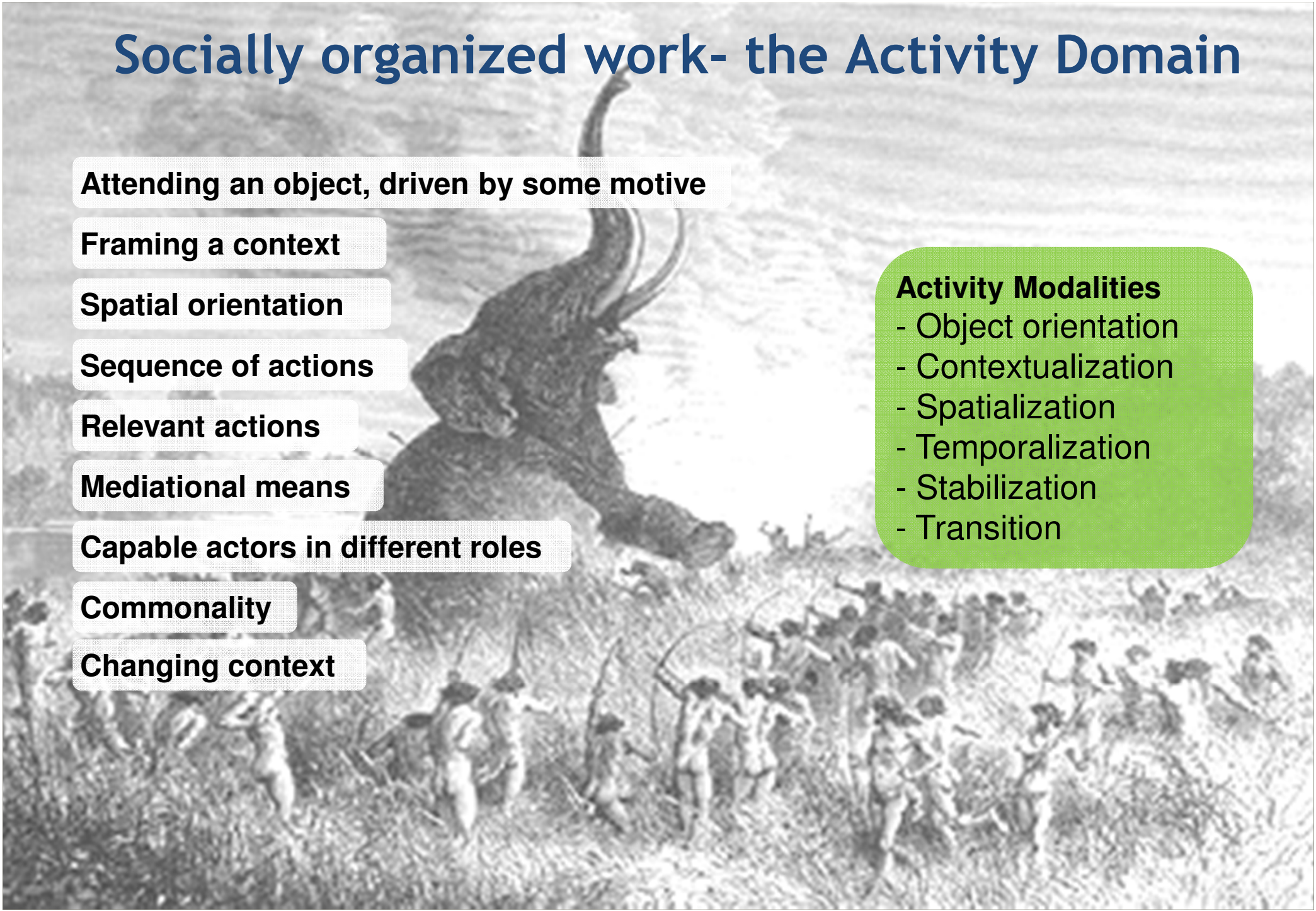
Capable actors in different roles

Commonality

Changing context

Activity Modalities

- Object orientation
- Contextualization
- Spatialization
- Temporalization
- Stabilization
- Transition



Thus

The construction of useful artifacts, language, institutions, etc., devised for action, are in some way compatible (congruent) with innate predispositions for action

Manifestations of the activity modalities will be found in various shapes and forms depending of the nature of the activity domain

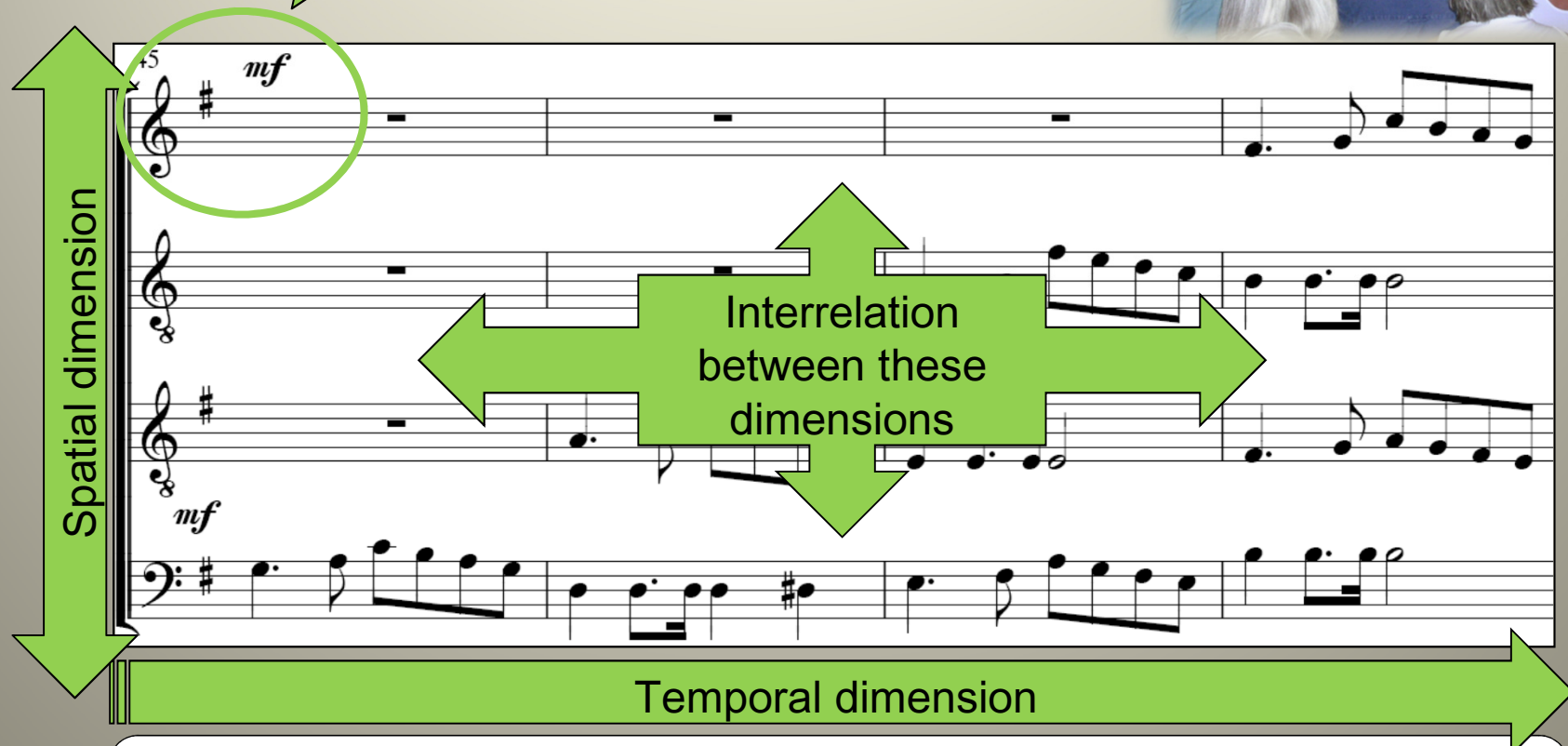
One example - a concert



Coordination of actions

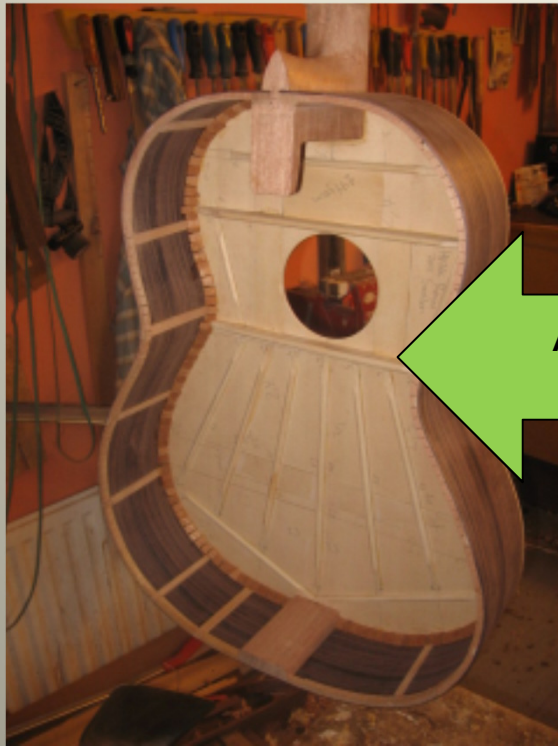


Normative dimension



This notation system is 800+ years old!
It is plausible that it has evolved to fit human faculties

Coordination between work contexts





“Individual coordination”



“Social coordination”

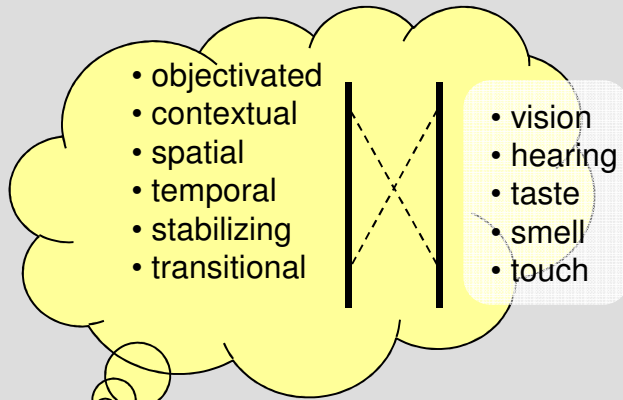


Same modalities regardless of individual or social coordination
Social coordination requires additional coordination efforts

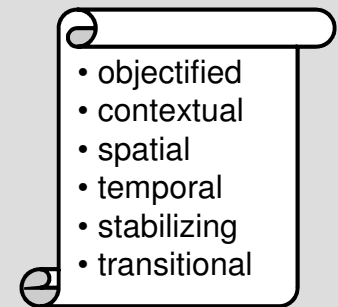
Conjecture:

There are innate neural predispositions for developing capabilities in all activity modalities and their interdependencies

Manifested neural elements



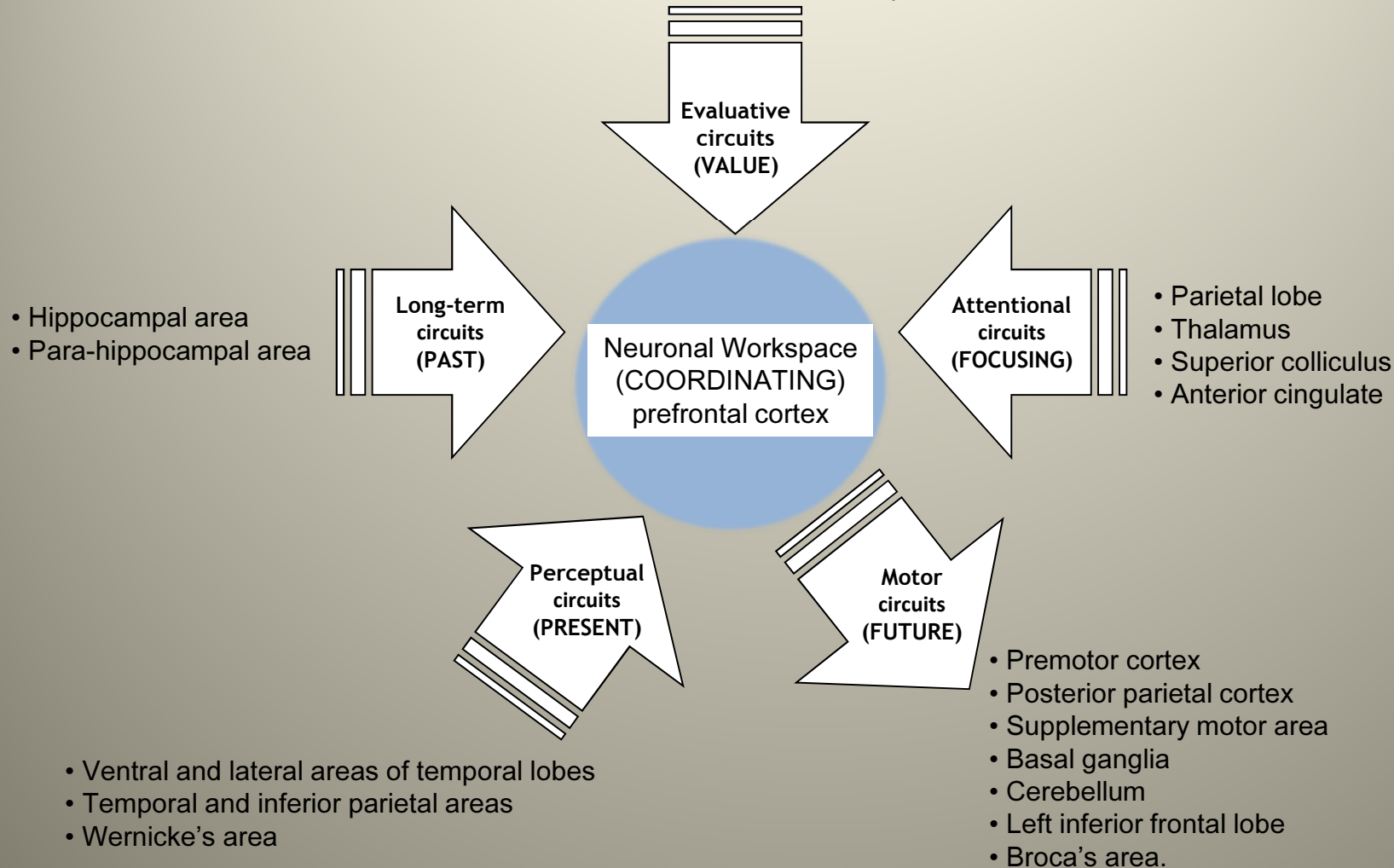
Manifested social elements



The neuronal workspace hypothesis

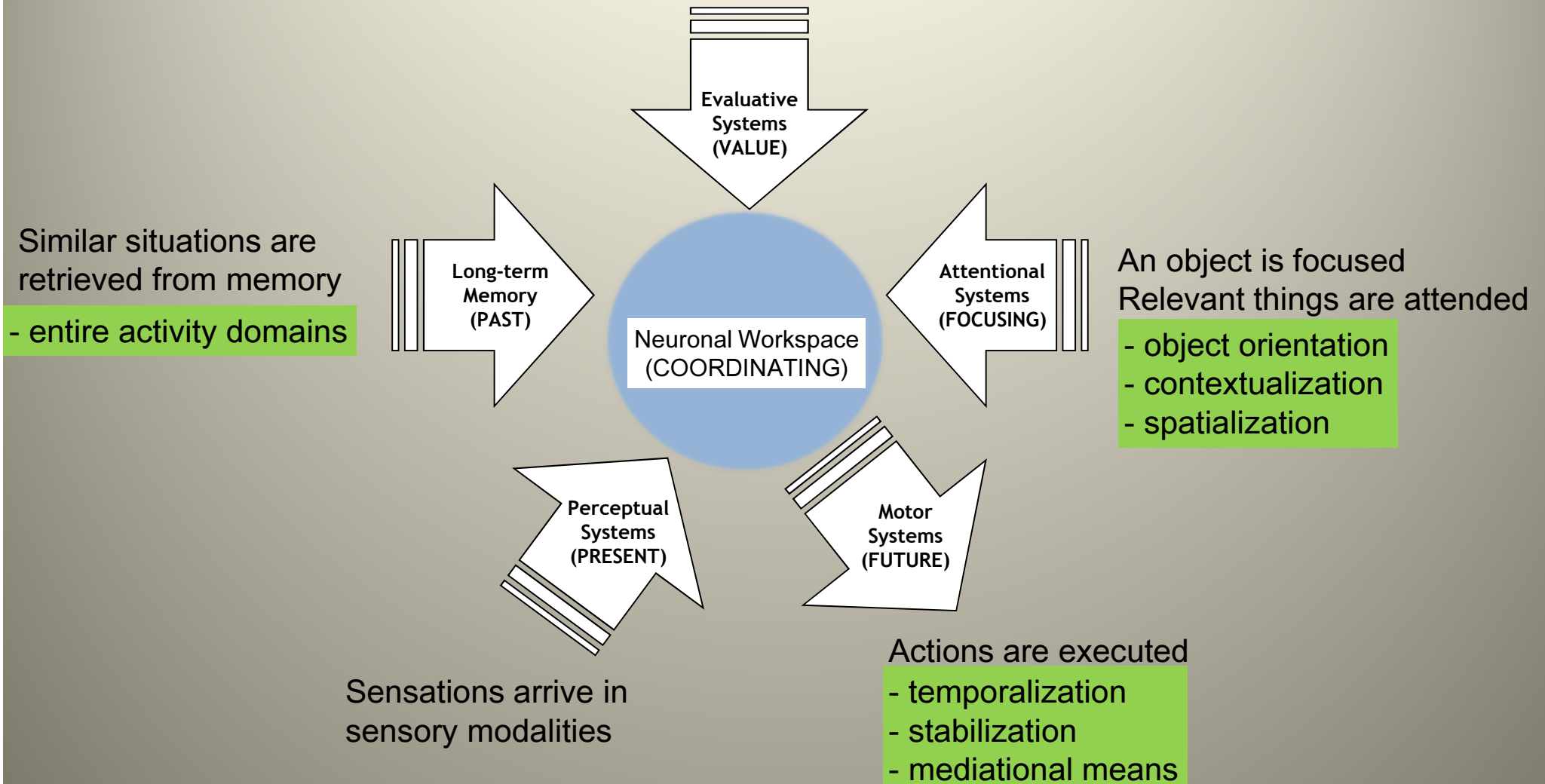
(adapted after Dehaene, Kerszberg, & Changeux, 1998)

- Orbitofrontal cortex
- Anterior cingulate
- Hypothalamus
- Amygdala
- Ventral striatum as well as the prefrontal cortex

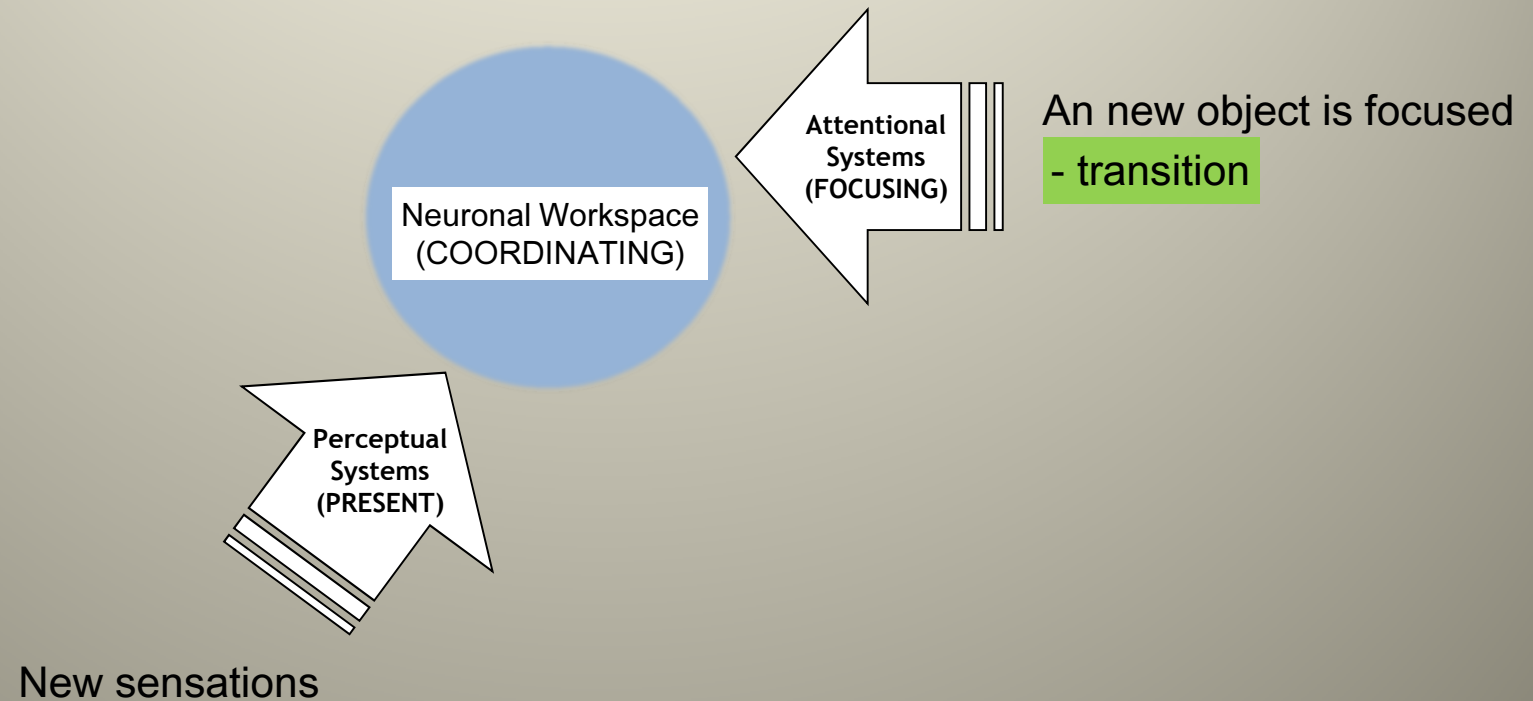


The neuronal workspace hypothesis

The current situation is evaluated for alternative actions



The neuronal workspace hypothesis



The activity modalities

- a new perspective on something that we all know and utilize every day!