INVESTMENTS IN EDUCATION DEVELOPMENT

Key competences of Service / Service System innovation

Murphy&Spohrer approach

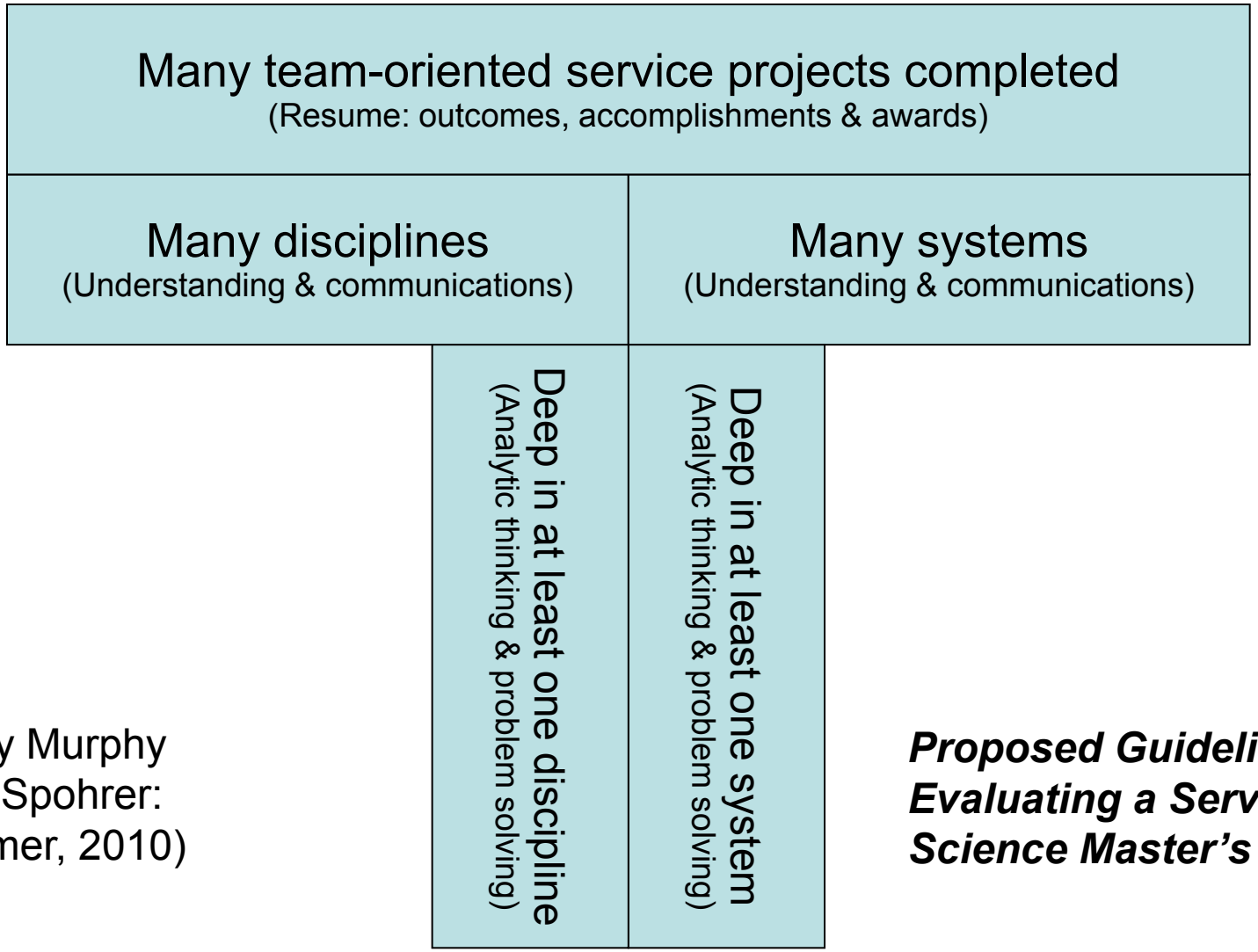
Project DELLIISS

S-R-O-D Scheme

Topics

- Wendy Murphy and Jim Spohrer approach
  - New curriculum evaluation
- Project DELLIISS deliverables
  - New profession definition
- S-R-O-D scheme
  - One possible way to understand in contexts
- GTM and the consequences
  - …

“T-shape” professional revised



Wendy Murphy
& Jim Spohrer:
(Summer, 2010)

Proposed Guidelines for Evaluating a Service Science Master’s Program

What is a Service Science Masters program?

"A Service Science Master's degree is an advanced degree in any discipline and service system which is grounded in a single discipline (such as engineering or business) while also developing the students' ability to understand and communicate across / among multiple disciplines."

Wendy Murphy & Jim Spohrer[4] (Summer, 2010)

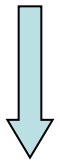
Service context

- The program overall must be multi-disciplinary.
- It must provide an integrated educational experience in a *context of Services* that develops the ability of graduates to apply pertinent knowledge to solving problems working across / among multiple disciplines and service systems.
- The notion of value-cocreation is important to cover as well as using cases and examples about services.

Wendy Murphy
& Jim Spohrer
(Summer, 2010)

Program outcomes

- Professional skills
- Attitudes
- Disciplinary field and Service System



Wendy Murphy & Jim Spohrer (Summer, 2010)

Professional skills

Graduates have:

- an ability to function effectively and lead multi-cultural and virtual teams
- an ability to work within a project management structure and contribute to business case-based decision making
- an ability to understand professional, corporate, ethical and social responsibilities
- an ability to use multiple communications mechanisms; to plan, organize, prepare, and deliver effective reports in written, oral, and other formats
- an ability to utilize the appropriate literature and use it as a principal means of research and staying current in the disciplines

Attitudes

- a recognition of the value of collaboration and the ability to collaborate
- a recognition of the need for, and an ability to engage in lifelong learning
- a respect for diversity and a knowledge of contemporary professional, societal and global issues
- a commitment to quality, timeliness, continuous improvement and innovation

Disciplinary field and Service System

Graduates are able to

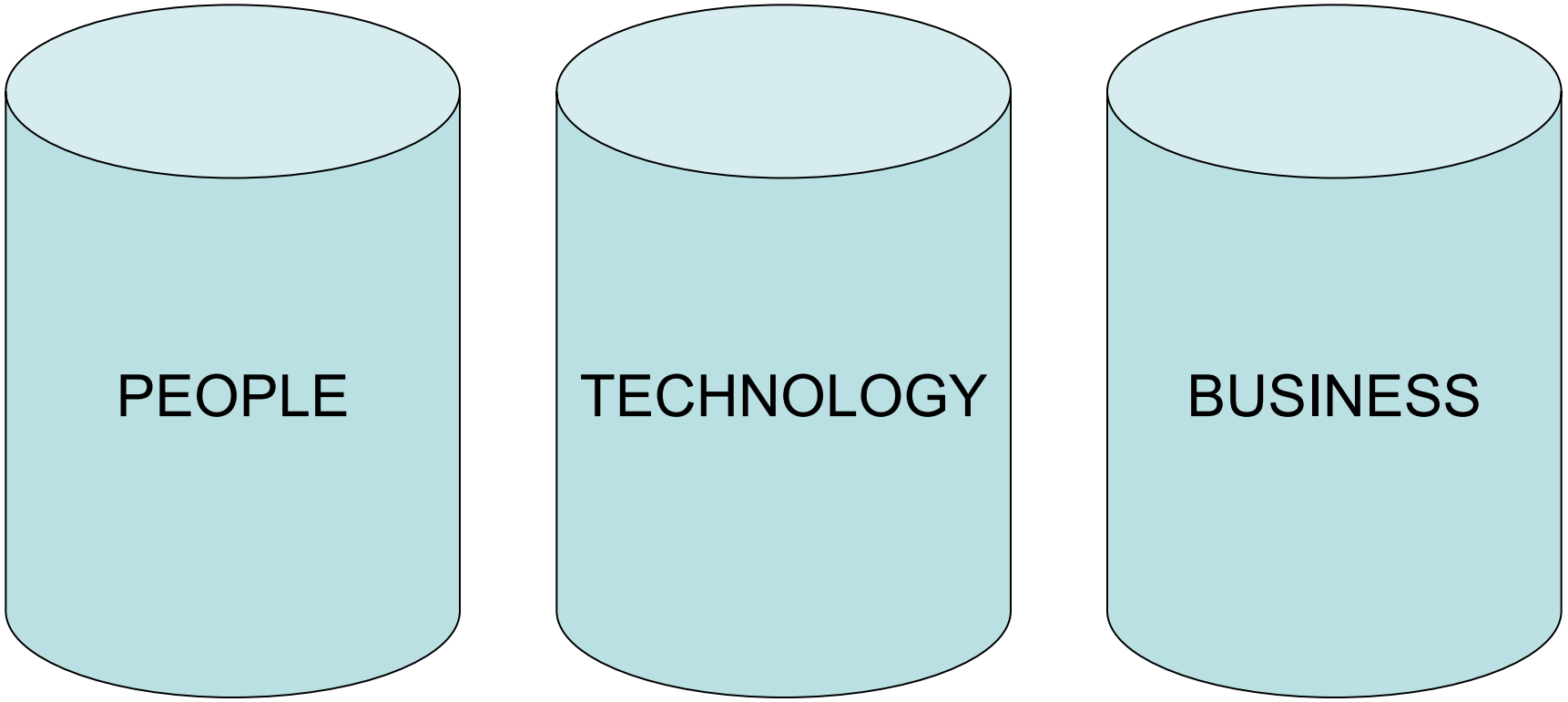
- apply masters level knowledge to be able to understand and communicate across / among the areas of technology, people and business
- apply masters level knowledge to demonstrate analytic thinking and problem solving within one discipline and for one or more system

Service System

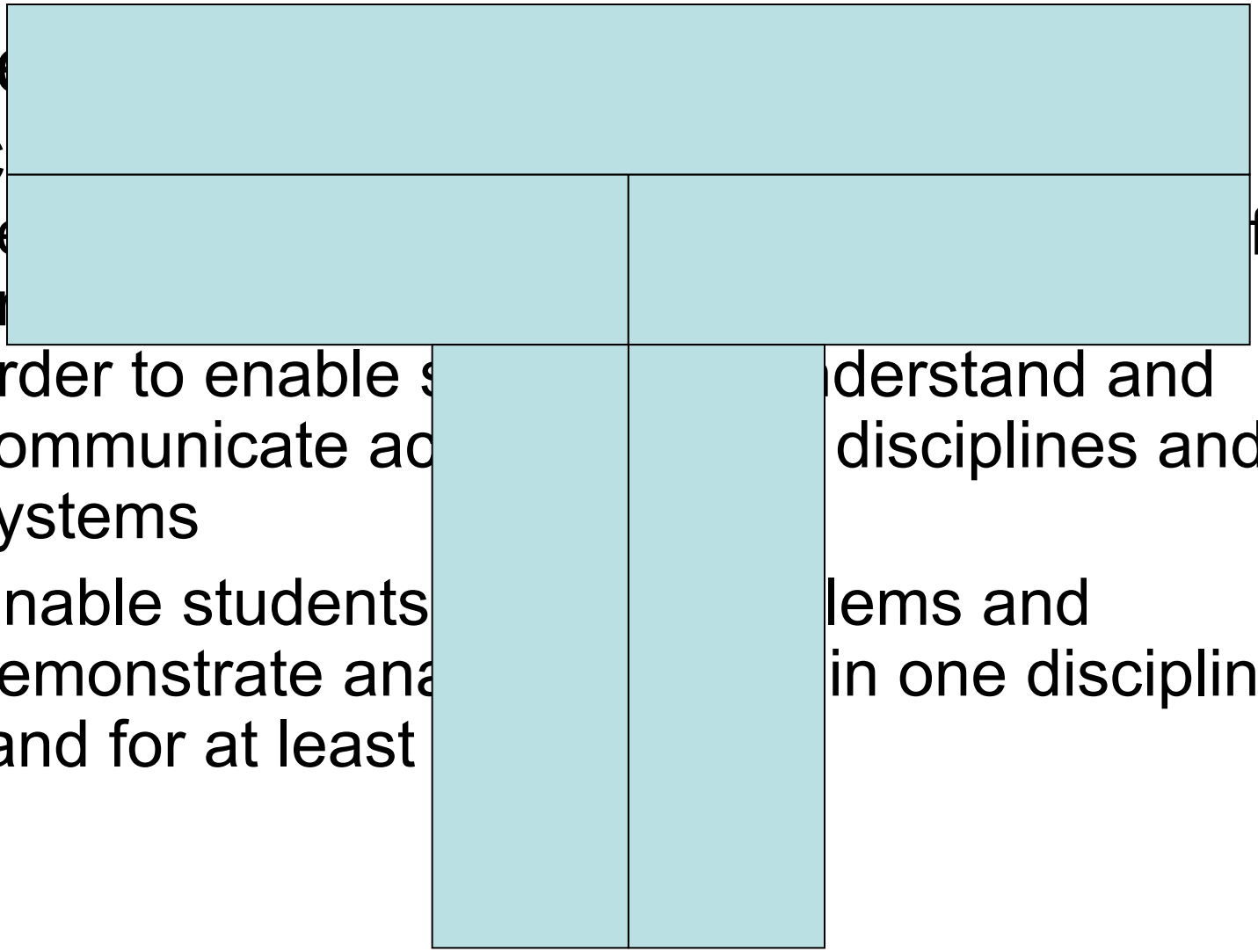
revised definition

- A ***system*** is a set of entities involved in relationships and interactions.
- We think of ***service systems*** as dynamic human centered value co-creation systems.
- These are “real world application” of disciplines.
- Every day nearly every person is a customer explicitly or implicitly of the following groups of systems:
  - Systems that meet routine daily needs for everyone (moving material, energy, information)
  - Systems for people's life planning (places and life-styles services)
  - Systems for governing (public services, rules and policies)

What are the 3 pillars of modern society?



Depth for disciplines



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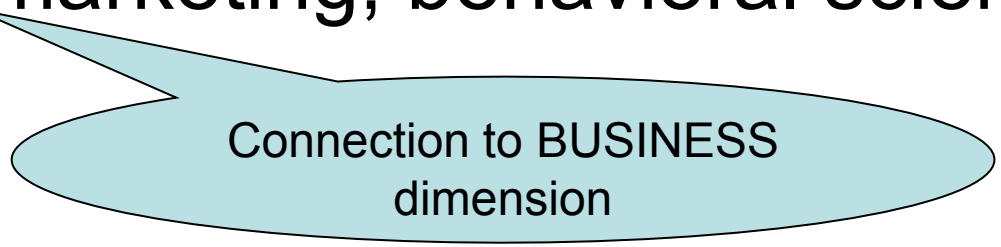
  order to enable s derstand and
  communicate ac disciplines and
  systems
- Enable students lems and
  demonstrate ana in one discipline
  (and for at least

Technology

- Computer science
- Information science
- Decision science, data mining & analysis
- Systems engineering
- Systems science
- Other engineering

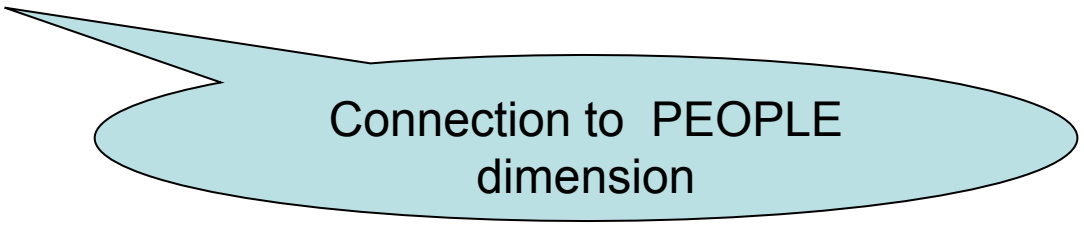
People

- Government, political science, law, sociology, ethics
- Human factors engineering
- Organizational science, leadership
- Psychology, cognitive science
- Learning science, strategy
- Service marketing, behavioral science



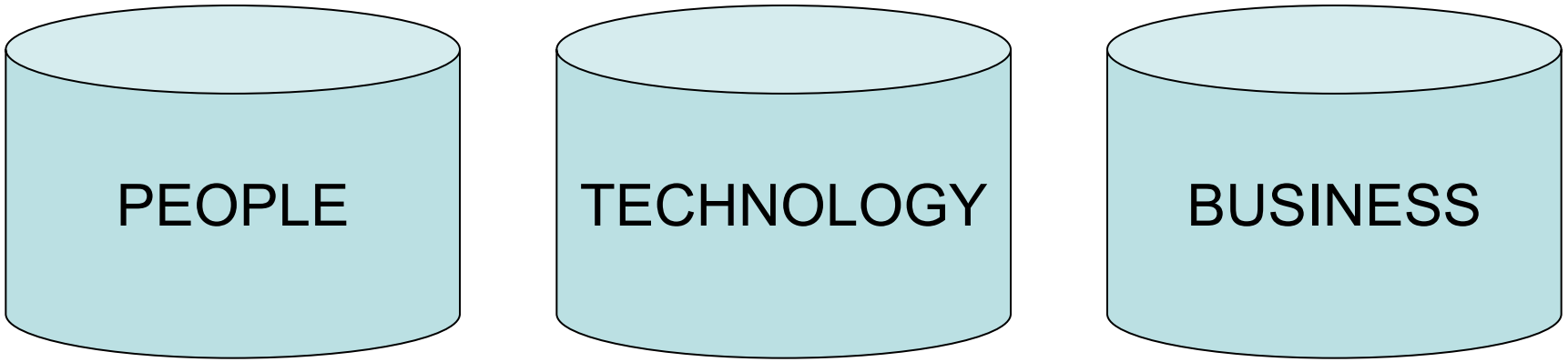
Business

- Innovation management
- Project management
- Service design
- Service operations
- Business management, process management, service management
- Economics, finance
- Ethics



Service Science Masters Program

- Integration of competences
- Understanding/communication cross disciplines
- Understanding/communication cross systems
- Deepnes of competences in at least one discipline
- Deepnes of competences in at least one system



DEsigning **L**ifelong **L**earning for **I**nnovation in **I**nformation **S**ervices **S**cience

This project has been funded with support from the European Commission

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HENRI TUDOR
CENTRE D'INNOVATION
PAR LES TECHNOLOGIES DE L'INFORMATION
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DE CATALUNYA
BARCELONATECH

UNIVERSITÉ
DE GENÈVE

FEUP
Universidade do Porto
Faculdade de Engenharia

FACULTAS ARTIS INFORMATICÆ
UNIVERSITAS MASARYKIANA

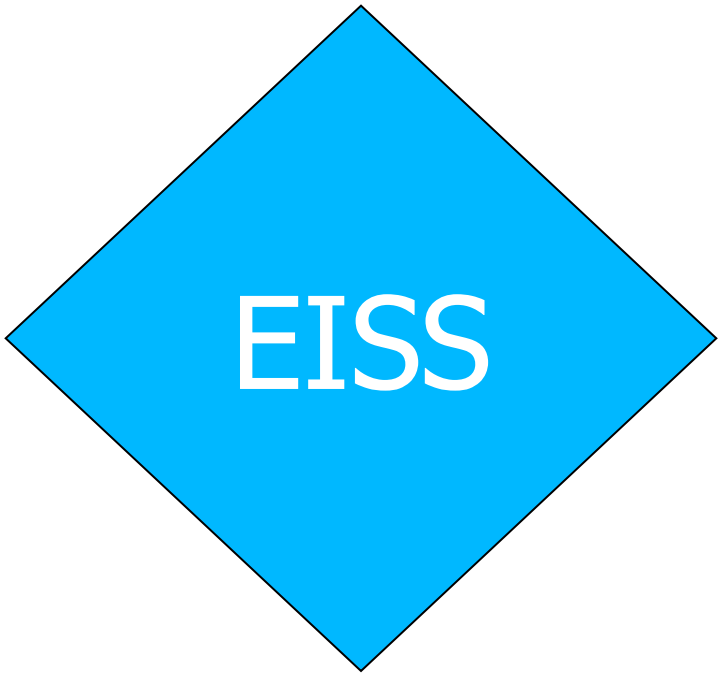
vrije Universiteit
amsterdam

UOC
Universitat Oberta
de Catalunya

UNIVERSITY OF
SKÖVDE

– PANTHÉON - SORBONNE –
UNIVERSITÉ PARIS 1

‘Engineer of Innovation in Service Systems’ key competences:



S-R-O-D

(a possible thinking pattern to be usable in Service Systems)

- Toward Effectiveness, Efficiency, Sustainability
- How to apply the holistic approach
- How to see the connections

S-R-O-D

- See
- Recognize
- Organize
- Do

Someone sees nothing, someone sees lot of connections …

"To recognize" is not the same as "to see"; this depends on the history of your attention distribution

To be able to **DO** something needs to be prepared. Preparation is about organization of agents.

Well prepared=organized set of agents can reach E-E-S

One possible way …

- … based on indeed rational approach
- Not the only one way; there exists lot of other possibilities
- Buddha said: This is my way. You can find your own way. Or, you can follow me. This depends on you.
- My offer is S-R-O-D

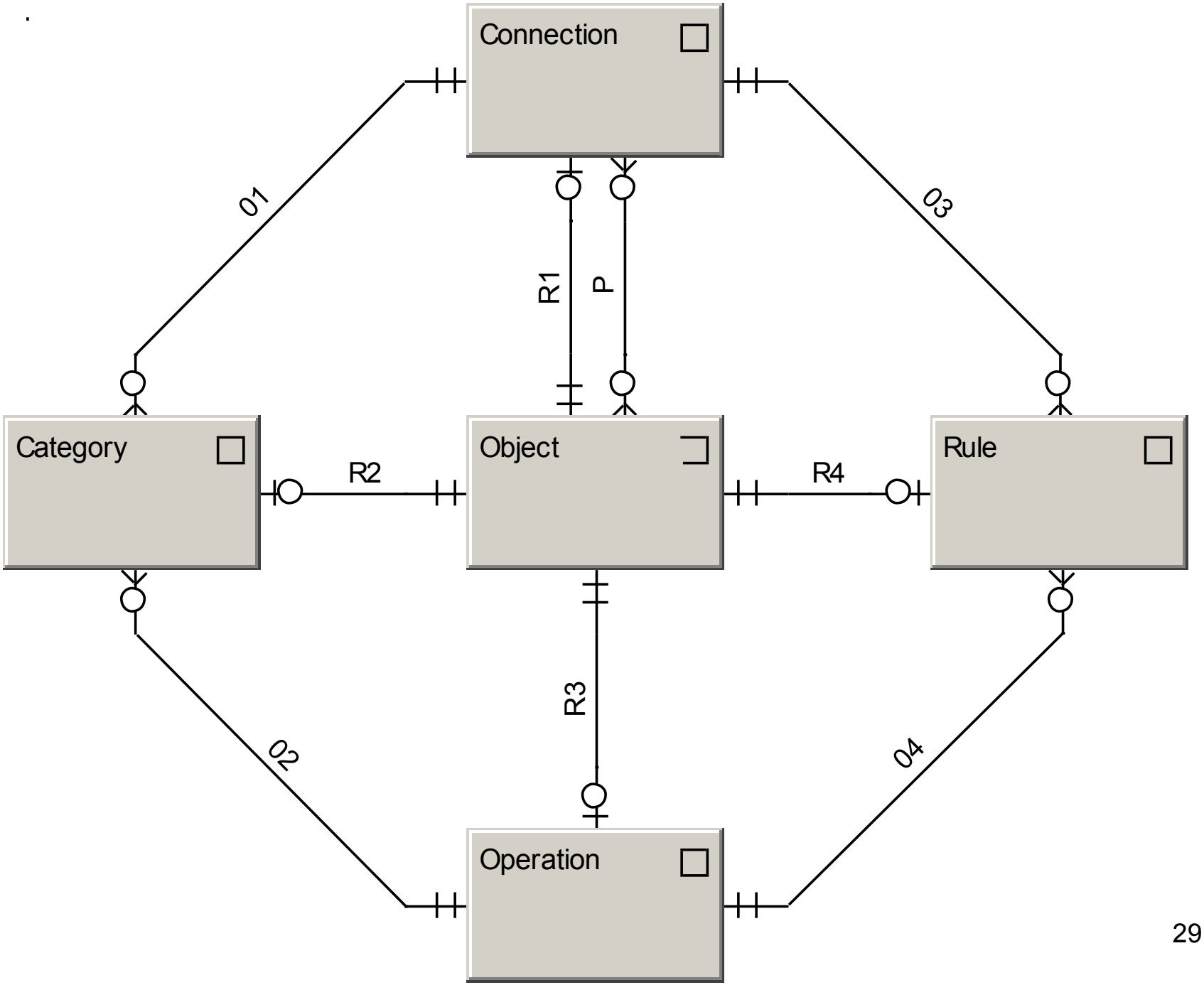
Premise-Question-Proposal

- (basic premise) Enactive perception
  - how the attention directs our perception
- (question) How to describe a game? The game of agents, processes, and events.
- (proposal) Diamonds of World understanding and manipulating
  - Playground: Diamond of Attention Focusing
  - Execution rules: Diamond of Cognitive Elements
  - Players organization: Diamond of Organization
  - Actions: (3-d) Diamond of Predictive Behavior

Playground: Diamond of Attention Focusing

See /

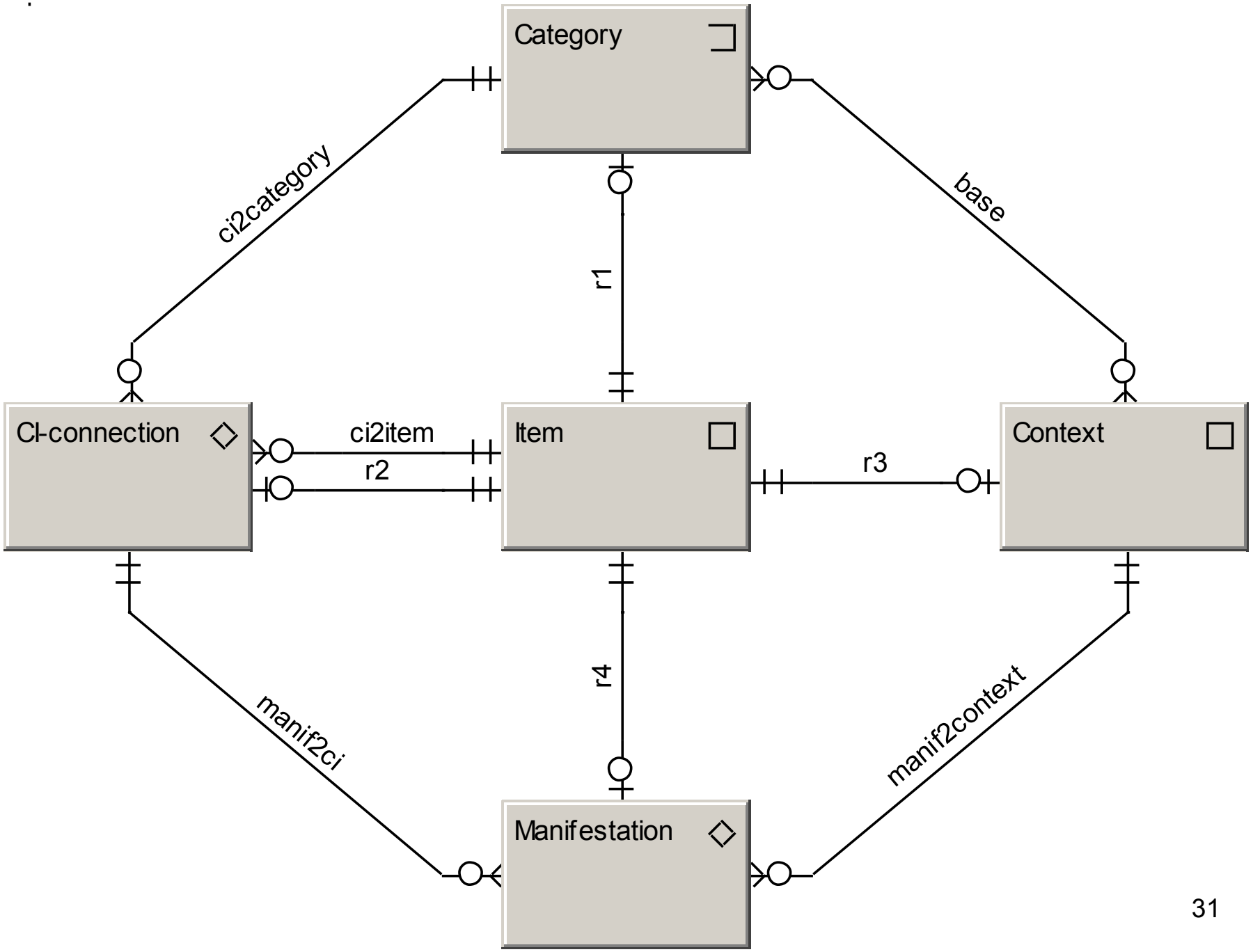
Perceive !


Connection
01
03
R1
P
Category
R2
Object
R4
Rule
R3
02
04
Operation

Execution rules: Diamond of Cognitive Elements

Recognize patterns /

Warn !!


Category
ci2category
r1
base
CI-connection
ci2item
r2
Item
r3
Context
r4
manif2ci
manif2context
Manifestation

Player's organization: Diamond of organization

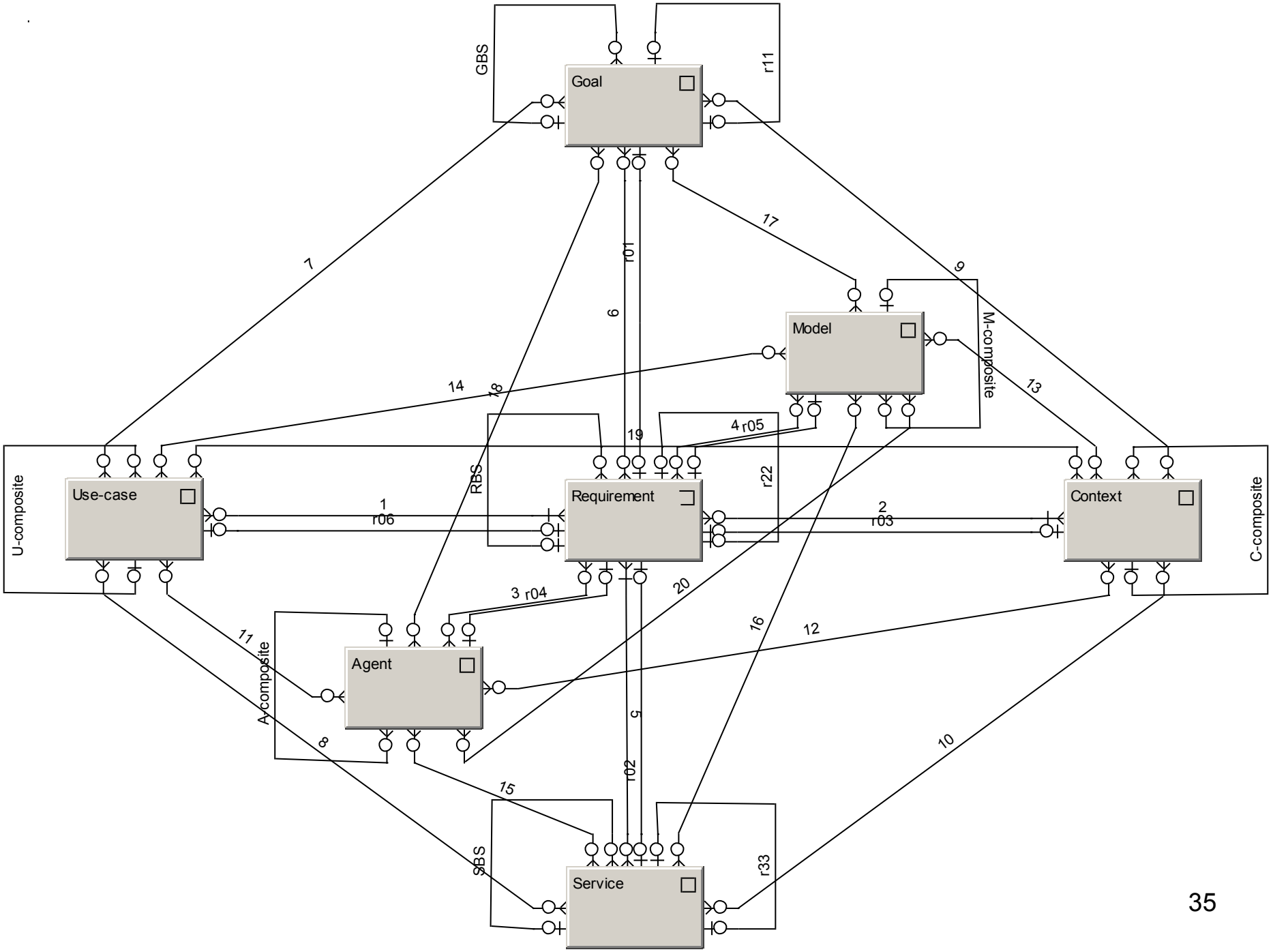
Organize /

Prepare for Action !!!

GBS
R22
Goal
reaching
establishing framework
establishing flow framework
fulfilling
follower
establisher
composite
Action
organizer
member
Agent
R11
flow -organizer
flow -member
Flow
supervisor
author
collaborator
learner
covering
R01
detail
focusing
R02
R33
Activity

Action:
Diamond of Predictive Behavior

Do something to survive /
Act in the World (the real one, or the cyberspace) !!!!


GBS
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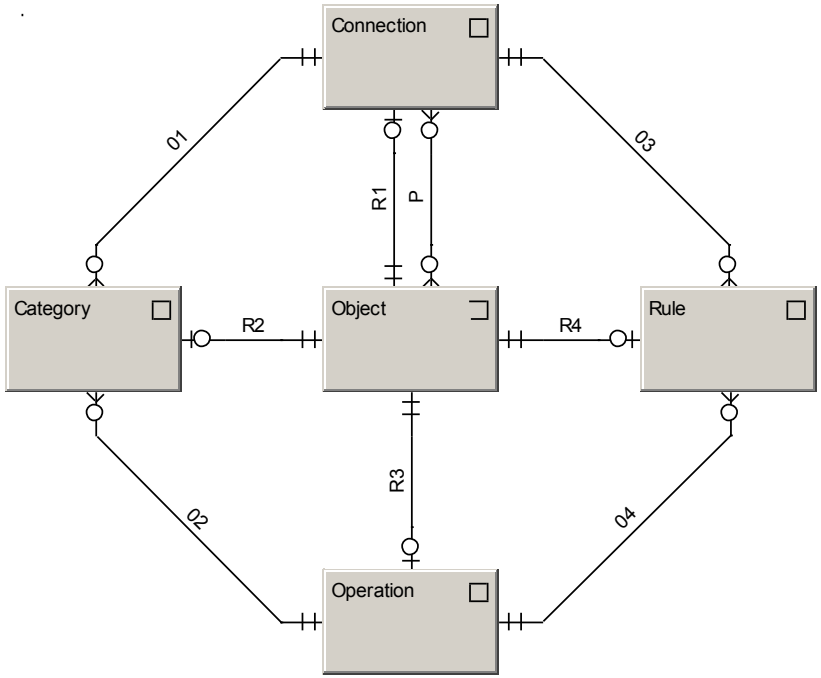
Goal
7
17
9
r01
6
Model
M-composite
14
18
13
19
4 r05
U-composite
Use-case
RBS
Requirement
r22
Context
C-composite
1
r06
2
r03
3 r04
20
16
12
11
A-composite
Agent
8
5
r02
15
10
SBS
r33
Service

S-R-O-D

Approach to the life

Approach to Service Systems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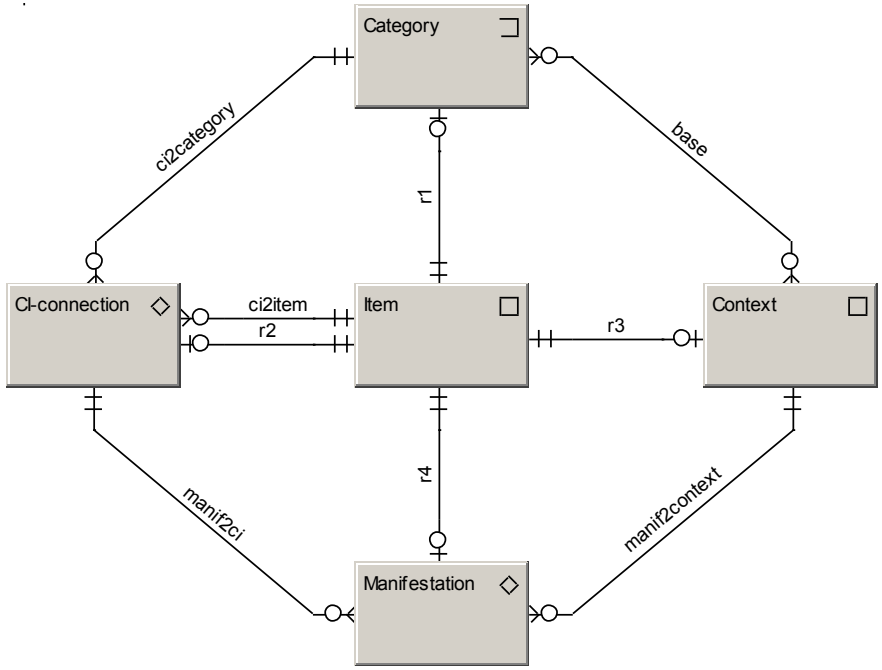
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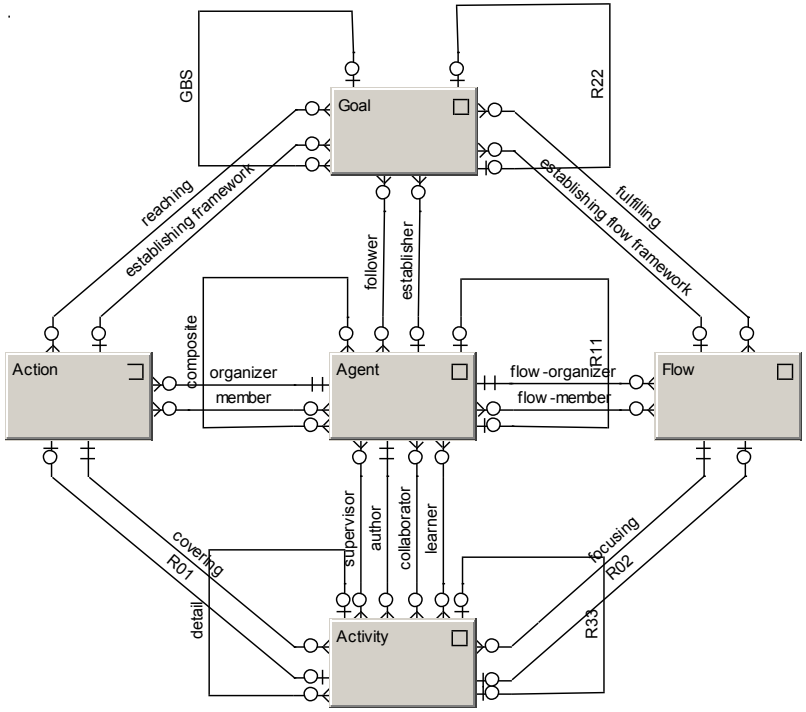
GBS
Goal
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covering
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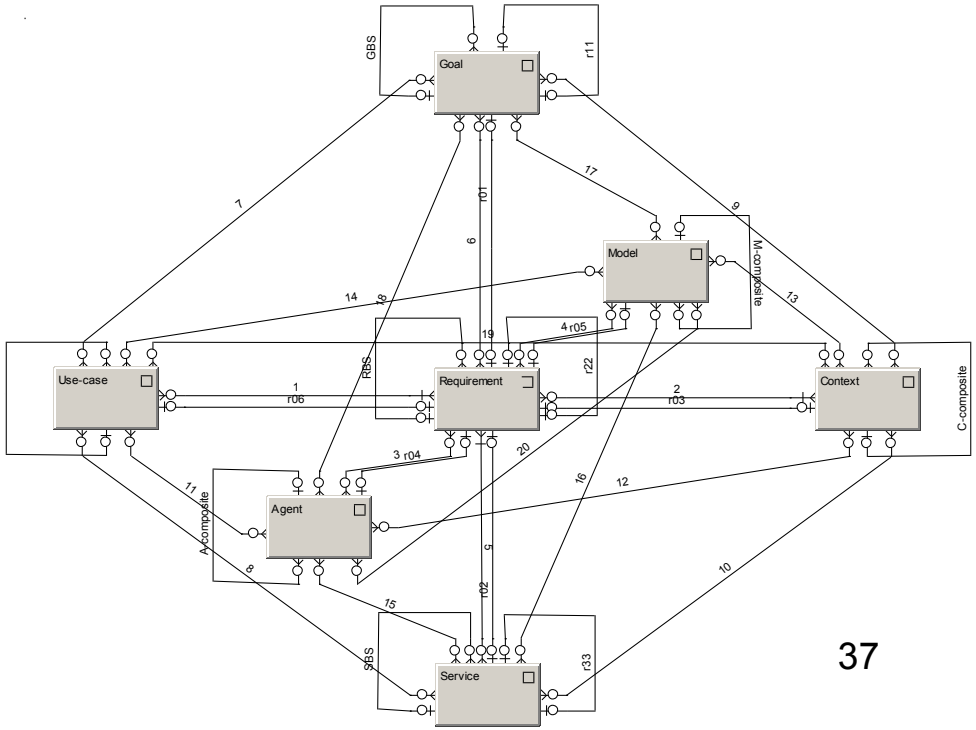
R02
detail
R33
Activity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Context
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12
A-composite
Agent
8
5
r02
15
10
GBS
Service
r33

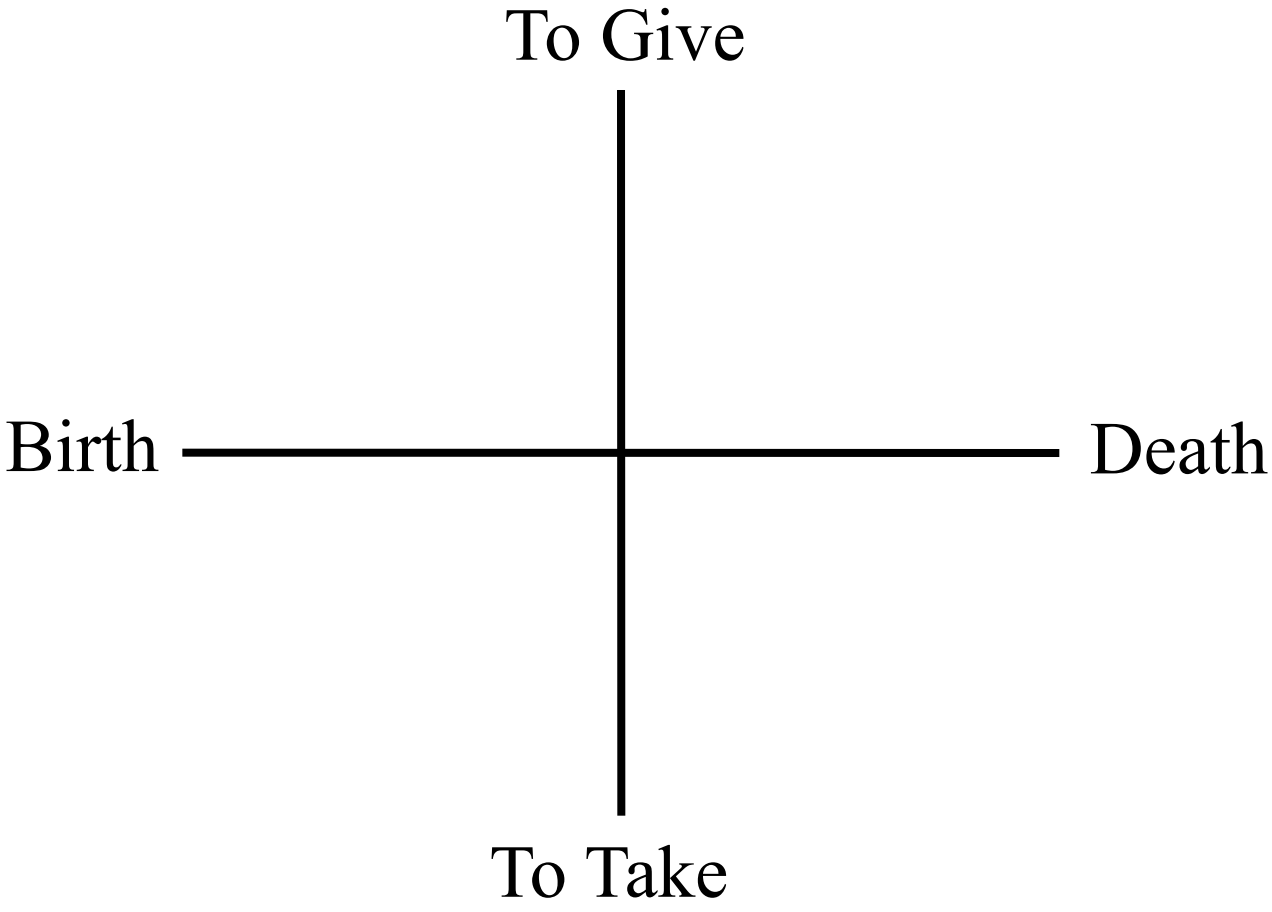
Concluding Comments

- Do not be an ape trying to do what others do, only!
- Success in Service Economy is based on personal investment.
- A Triple Imperative is: E-E-S
  - Effectivity
  - Efficiency
  - Sustainability

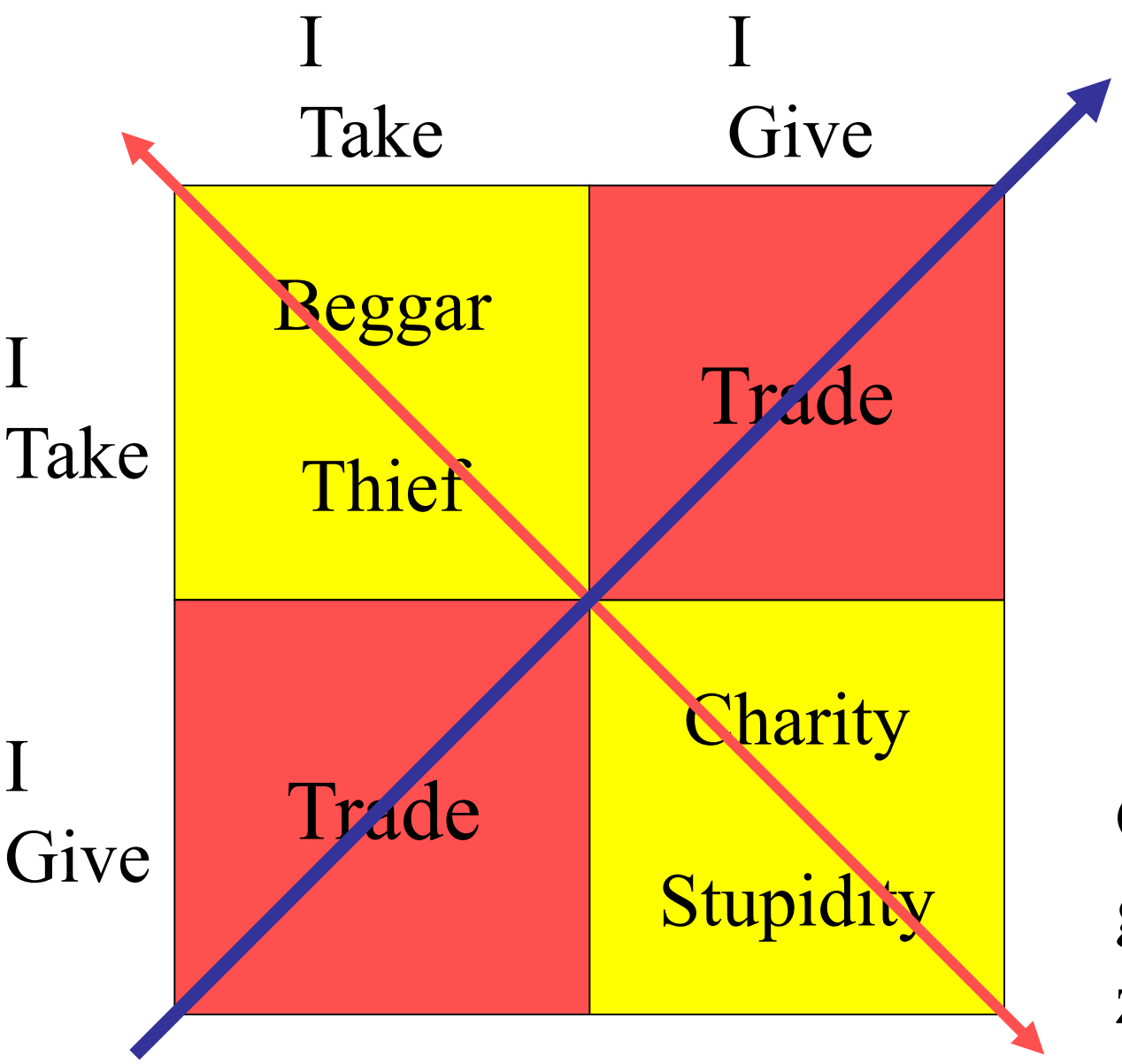
Ethic in this endeavor

- Pragmatic real-life perspective
- GTM
- (Draw it on the blackboard)

Pragmatic real-life perspective



The Give-Take Matrix (GTM)



Co-operation
added value

Competition
game with
zero sum

Recommendation

- Read, read, read
- Studying other faculty you have to read …
- … the custom not to read is incompetent
- Without investing your time, effort, money you will be nothing …
- Ape-like creatures trying to steal value created by those investing …
- Non-applicable figurines …