

Methodology name:

Instructions:

- (1) Please use the scale of 1-10 to evaluate each attribute.
- (2) The “Rate” reflects the extent that you think the attribute is supported in the methodology. 10 means it is fully supported and 1 means that it is not supported at all.
- (3) The “Weight” reflects the extent that you think the attribute is important to agent-based software design and development. 10 means that it is extremely important and 1 means that it is not important at all.
- (4) Please fill in all fields to the best of your knowledge, and avoid scoring in “ZERO”. If exact figures are not available, give the best estimate and make a note as a short comment on a separate sheet to justify your evaluation. Please refer to the question number in your comment.
- (5) Take into account that the given scores will be normalized in such a way that 1=10%, 2=20% and so on.
- (6) Please keep the format, data, and sequence of the original table unchanged.
- (7) Any suggestions you may have would be appreciated.

		Rate	Weight
1. Agency-related Criteria			
1.1 Architecture Properties			
1.1.1 Organization	How good the methodology is in defining the organizational relationships between agents?		
1.1.2 Mobility	How capable is the methodology in presenting and modeling agent’s migration?		
1.2 Basic Properties			
1.2.1 Autonomy	To what extent the methodology can support and present the autonomous features of agents?		
1.2.2 Reactivity	To what extent the methodology supports reactivity?		
1.2.3 Reasoning	In this context, to what degree the methodology supports proactivity?		
1.2.4 Temporal continuity	To what degree the methodology can present and model temporal continuity in agents?		
1.3 Advanced (mental) Properties			
1.3.1 Beliefs	To what extent the methodology can present and model this cognitive property?		
1.3.2 Desires (goals)	To what extent the methodology can present and model the intended ‘goals’ of agents?		
1.3.3 Intentions (actions)	To what extent the methodology can present and model ‘intentions’?		
1.4 Learning ability	To what extent the methodology can present and support the ‘learning ability’ of agents?		
2. Modeling-related Criteria			
2.1 Notation	To what degree the methodology is effective in manipulating the notational components (i.e., syntax and semantics) and presenting texts and symbols?		
2.2 Ease of use and understanding	How easy the notation and models are to understand and use with this methodology?		

2.3 Expressiveness	To what degree the methodology's models and notation are capable for representing the desired multi-agent system with all the necessary concepts in an easily perceptible manner?		
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2.4 Abstraction	To what degree the methodology is effective in producing models at various levels of details and abstractions?		
2.5 Consistency	To what degree the methodology supports checking consistency between models such that no individual requirement is in conflict?		
2.6 Concurrency	To what degree the methodology is effective in producing models to present concurrency?		
2.7 Traceability	To what extent the methodology is capable to track dependencies and relationships between different models and between models and code?		
2.8 Derivation and Reusability	To what extent the methodology is capable to transfer models into other models, to make reuse of the created models, or to create a models from information present in other models by applying some means of explicit process and guidelines?		

3. Communication-related Criteria

3.1 Local Communication (Basic Sociability)

3.1.1 Cooperation	How do you rate the methodology's support to define and present this feature?		
3.1.2 Coordination	How do you rate the methodology's support to define and present this feature?		
3.1.3 Competition	How do you rate the methodology's support to define and present this feature?		
3.1.4 Negotiation	How do you rate the methodology's support to define and present negotiation?		

3.2 Wide Communication (Advanced Sociability)

3.2.1 Interaction with the external environment	To what extent you think the methodology can support and present the interaction of agents with an external environment? Note that we assume an external environment as a remote environment which is usually heterogeneous and/or having different ontology.		
3.2.2 Agent-based user interface	To what extent you think the methodology can provide effective description of interfacing with its MAS' users (e.g. human agents)?		
3.2.3 Subsystems interaction	To what extent the methodology can provide a tool for presenting and modeling subsystems of agents that collaboratively interacting together?		
3.2.4 Bio-induction	To what extent the methodology can present and model this feature that concerns such a higher level of communications?		

4. Process-related Criteria

4.1 Development Lifecycle

4.1.1 Architectural design	To what degree the methodology is effective in supporting the process of gathering, analyzing, and modeling the requirements of a potential MAS?		
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4.1.2 Detailed design	To what degree the methodology is effective in supporting the tasks associated with the process of carrying out the detailed design of a potential MAS?		
4.1.3 Verification and Validation	To what extent the methodology is capable in supporting verification and validation?		
4.2 Refinability	To what extent the methodology is effective in supporting clear procedures for refining models gradually in order to accomplish implementation?		
4.3 Managing complexity	To what extent the methodology can provide effective modeling tools that facilitate the decomposition, assignment, and management of tasks among agents?		
4.4 Ease of use and understanding	To what extent the methodology supports the following features: - Standard notation - Standard modeling language - Ease to understand and follow process steps and phases		
5. Upgrading-related Criteria			
5.1 Modifiability	How easy is the methodology in supporting changes to an MAS after implementing it?		
5.2 Scalability	How good is the methodology in handling and integrating the requirements for a large number of agents?		
5.3 Open systems support	To what extent the methodology can provide support for open systems to allow dynamic integration (or removal) of new agents and/or resources?		
5.4 Adaptability – Dynamic Structure	To what extent the methodology is effective in supporting reconfiguration in dynamic systems (e.g. when agents are created or destroyed)?		
5.5 Integrateability	To what extent the methodology is capable to support integrating data acquired from several platforms with the knowledge possessed by the current active agents?		
6. Application-related Criteria			
6.1 Applicability	To what extent this methodology is NOT limited to a specific type of software domain (e.g., component-based systems or real time systems)?		
6.2 Maturity	To what extent the methodology is mature, in terms of the availability of the recourses that describe it (e.g., documentation, publications, manuals, and supporting case studies)? Is there any records/feedback from stakeholders to recommend/oppose this methodology? On a ten-point scale, how it was rated?		
6.3 Field history	To what degree the methodology is applied in practice, used by non-creators and used in developing real applications?		
6.4 Cost concerns	In terms of costs, to what extent the methodology is economically feasible?		
7. Supporting Properties			
7.1 Ontology	To what extent the methodology provides support for the specifying and modeling ontology in MAS?		

7.2 Security	To what extent the methodology provides support for designing security features in MAS?		
7.3 Collaborative Services	To what degree the methodology can support, presenting and modeling services, such as 'yellow pages' and 'blackboards' in a potential MAS.		
8. Perception-related Criteria			
8.1 Perceived ease of use	To what degree you believe that using this methodology would be easy enough and free of effort?		
8.2 Perceived usefulness	To what degree you believe that applying this methodology will be significantly effective in achieving its objectives?		
8.3 Intention to use	If you were asked to adopt an AOSE methodology in developing an agent-based system, to what degree you intend to use this methodology?		