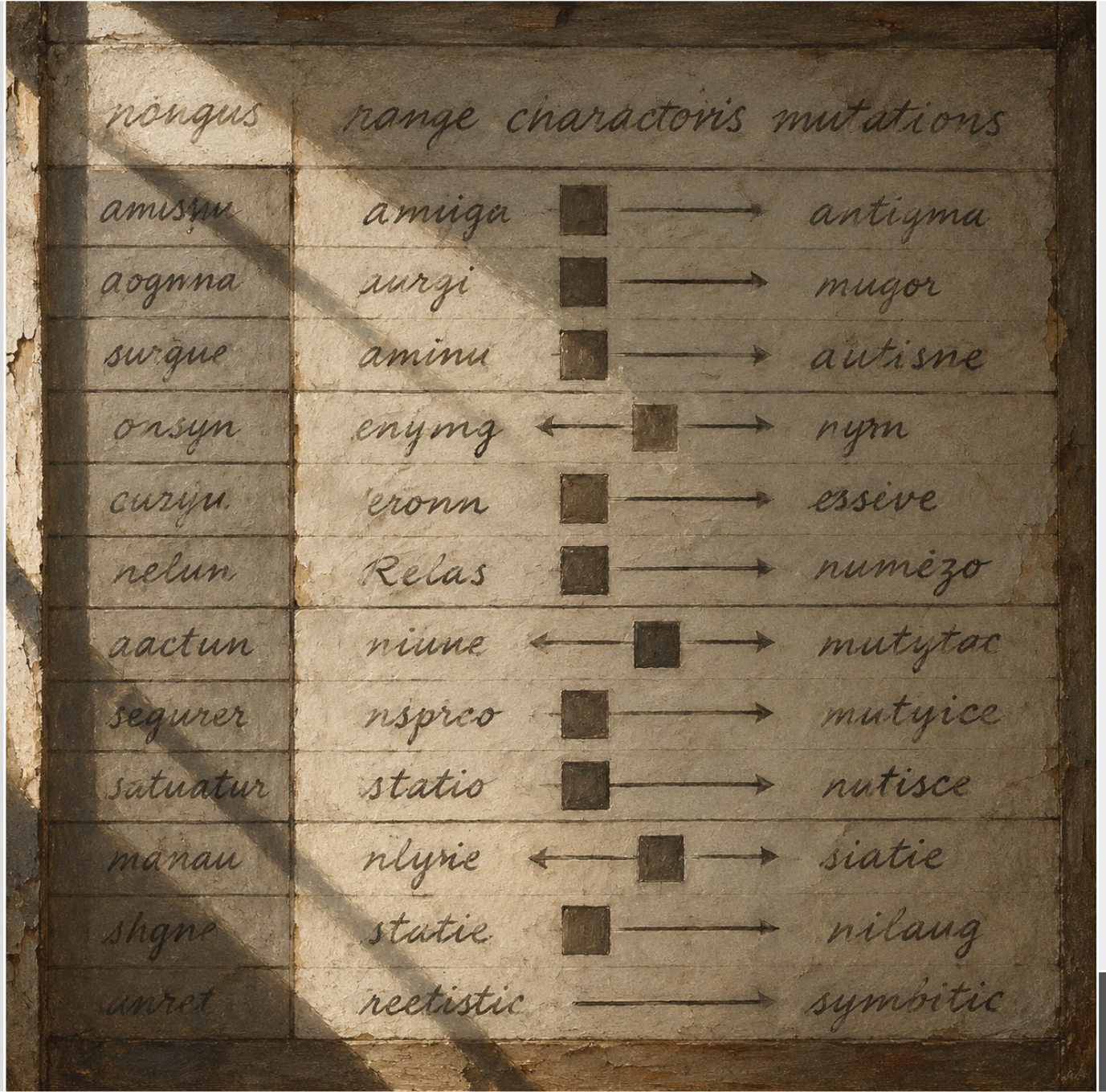
SERIOUS GAMING
DESIGN SPECIFICATIONS



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DEFINITIONS AND RANGES FOR COMPONENTS OF SERIOUS GAMING DESIGN SPECIFICATIONS

	COMPONENTS	DEFINITIONS	RANGES	
CONTEXT	PROBLEM	Problem (issue) or opportunity that we are trying to solve or address	Understood	Ambiguous
	OBJECTIVES	Objectives we are trying to achieve with the serious gaming	Knowledge transfer	Knowledge Creation
	MODELS	Qualitative and/or quantitative model of the reality that will be simulated	Qualitative	Quantitative
	NARRATIVE	Storyline and events driving the dynamics of the serious game when running	Reality based	Metaphor based
PLAYERS	TARGET	Intended number of target participants and how will they be structured	Single individual	Multiple groups
	FUNCTION	Organizational function (level of responsibility) the players are coming from	Operational	Managerial
	ROLES	Number and character of roles, their objectives, responsibilities, and decisions	Own real-life	Someone else's
	CULTURE	Character of individual and organizational cultures of players	Homogeneous	Heterogenous
PROCESS	SEQUENCE	Way in which the time will be treated during the serious game run	Real time	Concentrated time
	INTERACTION	Rules of interaction with and between players within the serious game	Directive	Self organizing
	STEPS	Character of role specific steps that players must follow during the run	Sequential	Iterative
	INDICATORS	System for processing and reporting the results of players decisions	Qualitative	Quantitative
ENVIRONMENT	LOCATION	Character and number of (parallel) locations for a serious game run	Single	Multiple
	FORM	Level to which the game takes place in an analogue or digitally created reality	Analogue	Digital
	MATERIALS	Character of materials and artefacts required to run the serious game	Static	Evolving
	REPRESENTATION	Way in which material will be attributed a substantive meaning during play	Realistic	Symbolic

CONTEXT QUESTIONS

PROBLEM

- What is a problem or opportunity that is driving the need for intervention?
- To what extent is it recognized and understood by all key stakeholders?
- What are the key issues that must be addressed or resolved?
- What are the boundaries of the scope (how deep and how broad)?
- Why is serious gaming seen as an appropriate approach?
- What is the larger context within which the game will take place?

OBJECTIVES

- Is the primary purpose knowledge creation or knowledge transfer?
- What is the value proposition (who will be benefiting and how much)?
- What are the specific objectives to be achieved?
- How will the achievement of these objectives be measured?
- What are the stakeholder agendas in relation to the objectives?
- What are the potential barriers to delivering the expected benefits?

MODEL

- Is the nature of the underlying model of reality quantitative or qualitative?
- Is the focus on present (existing) reality, future (desired) reality, or a transition?
- Is it to be treated as the only reality or as a framework for alternative realities?
- Are the elements of the reality to be gamed brought in by designers or players?
- How many different scenarios should be introduced and played out?
- What is the right level of detail / complexity for the chosen model of reality?

NARRATIVE

- Is the narrative based on the reality itself or a metaphor for that reality?
- Is the narrative focusing on key concepts, relationships or actual processes?
- What are the specific solutions or messages to be conveyed to players?
- Should these messages be communicated implicitly or explicitly?
- Does the narrative allow for or encourage different interpretations?
- Should the narrative be open to changes introduced by the players?

PLAYERS QUESTIONS

TARGET	• Who is the target audience for the game (the players)? • What is the age distribution of the intended audience? • What is the total expected number of players? • What is the expected number of players for a single game run? • Is there a minimum / maximum number of parallel game runs at the same time and place? • Are the same players expected to play more than once?
FUNCTION	• What are the current and/or future real-life roles of the players? • What is the function (level of responsibility) related to these real-life roles? • In what way do these real-life roles relate to the objectives of the intervention? • Is the primary motivation for taking part in a game mandatory or voluntary? • What is the impact of the motivation to participate on the acceptance to play? • What are the risks / opportunities related to the real-life roles of players?
ROLE	• Are participants interacting with the game as an individual or as a team? • Are participants within a team playing the same role or a different role? • Is there a need for multiple teams in the game? • Are teams dependent on actions of other teams or do they operate independently? • Are the roles in the game real-life roles of the players or are they imaginary one? • Is there a need for participants to play somebody else's real-life roles?
CULTURE	• What is the nature of the organizational culture the players are coming from? • What is the nature of the social culture the players are coming from? • How could these cultures manifest themselves in relation to the game? • Are there any distinctive social styles of the participants to be considered? • How could these social styles manifest themselves in relation to the game? • What are the risks / opportunities related to the culture and social styles of players?

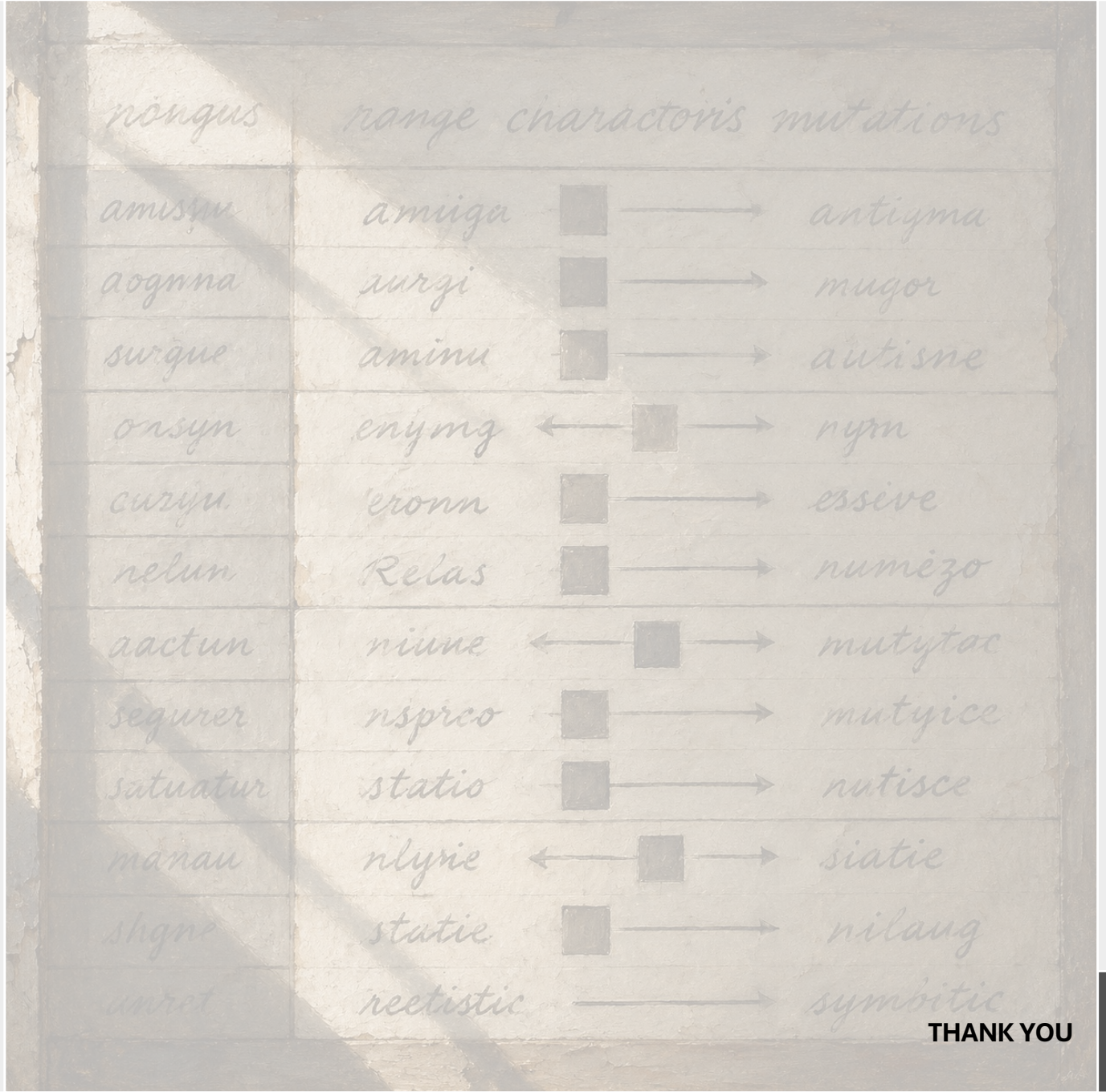
PROCESS QUESTIONS

SEQUENCE	• Are there any game related activities that need to take place before or after the run? • Are there any input (from before the run) and output (for after the run) requirements? • What is the expected duration of the game run? • Is the duration to be fixed or should it be flexible and to what extent (minimum / maximum)? • Is the time horizon that is simulated during the game real-time based or concentrated? • How will the transfer of learning between the game and the reality be managed?
INTERACTION	• Who are the facilitators, and do they require some specific skills or knowledge? • To what extent should the interaction be guided and controlled by a facilitator? • To what extent should the interaction be evolving (self-organized by the participants)? • To what extent is the prescribed interaction open for interpretation by the players? • Is the basis for interaction a group dynamics or a process flow? • How far could the comfort zones of participants be stretched (content and/or process)?
STEPS	• Is the game a single sequence of steps or does it have several iterations? • What is the minimum number of iterations required for achieving the game objectives? • What is the desired tempo (pace) of going through the steps of the game? • To what extent are the steps in the game predesigned and/or determined by the players? • Is there a need for the steps to be game role specific? • To what extent is the content in the game preloaded and/or developed by the players?
INDICATORS	• What indicators will be used to measure the success of participants within the game? • Are the performance indicators within the game qualitative or quantitative • How do these in-game indicators relate to the expected outcomes of the game? • Is the information on the performance during the run to be used after the run and how? • Who will lead the discussion on the relevance of what has been experienced during the run? • What indicators will be used to measure the success of the game run itself?

ENVIRONMENT QUESTIONS

LOCATION	• Does the game require a single location or a multiple location setup? • Is the game bound to a specific location or it can take place anywhere? • If multiple locations, are there any requirements on the proximity of these locations? • Are there any specific location setup requirements (size, flexibility)? • Are there any specific technology related requirements from the location? • Is there a need to change the location during the game?
FORM	• Is the game taking place in a fully simulated reality or in an alternate or augmented reality? • If it is a simulated reality, does it have an analogue or a digital form? • If both analogue and digital, which part is analogue and which part is digital? • If the form is digital, is it a 2D, 3D, or a fully immersive representation of reality? • What is the required level of immersion into the simulated reality? • What is the level of fidelity required from the form of the game?
MATERIALS	• Does the game require game-specific materials for the play to take place? • Are game materials transformed, or do they remain the same when used by the players? • Are there any reproducibility requirements for the game materials? • Are there any usability related requirements for the game materials (e.g. size, material type)? • Are there any transportability related requirements for the game materials? • Are there any durability (sustainability) related requirements for the game materials?
REPRESENTATION	• To what extent are the materials based on a more realistic representation of reality? • To what extent are the materials based on a more symbolic (abstract) representation of reality? • If representation is symbolic, is there a requirement for a game-specific symbolic structure? • In what way will the substantive meaning be attributed to the game materials? • Are there any esthetics related requirements for the representation of substantive meaning? • Are there any culture related sensitivities to be considered regarding the representation?

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THANK YOU

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