NORTH ATLANTIC TREATY ORGANISATION

HEADQUARTERS SUPREME ALLIED COMMANDER TRANSFORMATION
7857 BLANDY ROAD, SUITE 100
NORFOLK, VIRGINIA, 23551-2490

REQUEST FOR PROPOSAL

RFP-ACT-SACT-25-64

Artificial Intelligence support to NATO Modeling and Simulation Life Cycle

Amendment 1

Bidding Instructions

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BIDDING INSTRUCTIONS

1. General

This is a Firm Fixed Price deliverable contract in accordance with the HQ SACT General Terms and Conditions; Contract Award is contingent upon funding availability; Partial bidding is not allowed.

HQ SACT GENERAL TERMS AND CONDITIONS DATED 03/13/2024 ARE APPLICABLE TO THIS PROCUREMENT AND CAN BE LOCATED ON THE ACT WEBSITE AT **WWW.ACT.NATO.INT/CONTRACTING** UNDER CONTRACTOR INFORMATION.

2. Classification

This Request for Proposal (RFP) is a NATO UNCLASSIFIED document.

3. Definitions

(a) The "Prospective Bidder" shall refer to the entity that has indicated thereon its intention without commitment, to participate in this RFP.

(b) The term "Bidder" shall refer to the bidding entity that has completed a bid in response to this RFP.

(c) The term "Contractor" shall refer to the bidding entity to whom the contract is awarded.

(d) The term "Contracting Officer" designates the official who executes this RFP on behalf of HQ SACT.

(e) "Contracting Officer`s Technical Representative" or "COTR" is the official who is appointed for the purpose of determining compliance of the successful bid, per the technical specifications.

(f) The term "HQ SACT" shall refer to Headquarters Supreme Allied Commander Transformation.

(g) The term "ACT" shall refer to Allied Command Transformation.

(h) The term "NATO" shall refer to the North Atlantic Treaty Organisation.

(i) The term "days" as used in this RFP shall, unless otherwise stated, be interpreted as meaning calendar days.

4. Eligibility

This RFP is open to governmental or commercial entities:

(a) Established in a North Atlantic Treaty Organisation Alliance member nation.

(b) Working in the required field and legally authorised to operate in the country or countries in which this contract is to be performed at the time of bidding.

(c) Has performed the desired past performance including size, cost and scope, as described in this RFP.

(d) **All proposed key personnel on this requirement must be citizens of a NATO member nation.**

5. Duration of Contract

(a) The contract awarded shall be effective upon date of award.

(b) **Period of Performance:** The contract period of performance is from ~~25 August~~ 15 September to 31 December 2025.

6. Exemption of Taxes

In accordance with the agreements, (Article VIII of the Paris Protocol, dated 28 August 1952) goods and services under this contract are exempt from taxes, duties, and similar charges.

7. Amendment or Cancellation

(a) HQ SACT reserves the right to amend or delete any one or more of the terms, conditions, or provisions of the RFP prior to the date set for bid closing. A solicitation amendment or amendments shall announce such action.

(b) HQ SACT reserves the right to cancel, at any time, this RFP either partially or in its entirety. No legal liability on the part of HQ SACT shall be considered for recovery of costs in connection to bid preparation. All efforts undertaken by any bidder shall be done considering and accepting, that no costs shall be recovered from HQ SACT.

8. Bidder Clarifications

(a) Prospective Bidders should seek clarification at their earliest convenience. Any explanation regarding the meaning or interpretation of this RFP, terms, clause, provision, or specifications, shall be requested in writing from the Contracting Officer. The Contracting Officer must receive such requests for clarification no later than 3 (three) calendar days prior to the bid closing date.

(b) In lieu of a bidders' conference, HQ SACT invites bidders to submit initial technical questions **no later than 23 July 2025.**

(c) Information in response to all inquiries / requests for clarification to a prospective bidder shall be furnished to all prospective bidders at http://www.act.nato.int/contracting as a Question-and-Answer addendum. All such addendums and any necessary solicitation amendments shall be incorporated into this RFP. Oral Interpretations shall not be binding.

9. Bid Closing Date

Bids shall be received at HQ SACT, Purchasing and Contracting Office, **no later than ~~18 Aug 2025~~ 01 Sept 2025 at 0900 hours, Eastern Time, Norfolk, Virginia, USA.** No bids shall be accepted after this time and date. **No hard copy proposals will be accepted.**

10. Bid Validity

Bids shall remain valid for a period of one hundred and twenty days (120) from the applicable closing date set forth within this RFP. HQ SACT reserves the right to request an extension of validity. Bidder shall be entitled to either grant or deny this extension of validity. HQ SACT shall automatically consider a denial to extend the validity as a withdrawal of the bid.

11. Content of Proposal

The company description portion of its technical proposal shall be limited to 10 pages.

A table of contents for the entire proposal:

(a) The bidder's full name, address, point of contacts, telephone, fax number, and website;

(b) Compliance statement (See Enclosure #1)

(c) Past performance (See Enclosure #2); references will be accepted in lieu of past performance;

(d) Provision of technical and price volumes;

(e) Compliance matrix (See Annex B to Statement of Work).

12. Proposal Submission

(a) Proposals shall be submitted electronically in two separate PDF documents; One containing the Technical Proposal and one containing the Price Proposal, each emailed separately to:

(b) Technical Proposal: hqsact.techproposal@nato.int

(c) Price Proposal: hqsact.priceproposal@nato.int

(d) Email subjects shall include the solicitation information along with company name (for example: RFP-ACT-SACT-25-64_Tech_ABC Inc. / RFP-ACT-SACT-25-64_Price_ABC Inc.). Allow sufficient time in your submission should you encounter email size challenges.

(e) **Price proposals shall be in U.S. Dollar currency**. Contractor may request payment post award in alternate currency based on agreed conversion rate.

(f) Prices shall be on a Firm Fixed Price Basis and include any relevant discount schedule.

(g) No oral bids or oral modifications or telephonic bids shall be considered.

(h) It is the ultimate responsibility of a prospective bidder prior to submission that all proposal submissions are reviewed to ensure they meet the technical, contractual and administrative specifications and that offers meet the limitations and expressed conditions.

13. Late Proposals

(a) It is solely the bidder's responsibility that every effort is made to ensure that the proposal reaches HQ SACT prior to the established closing date and time. Only if it can be unequivocally demonstrated that the late arrival of the bid package was the result of NATO staff negligence (mishandling) shall the bid be considered.

(b) A delay in email exchange due to the server or size restrictions does not constitute a delay by NATO.

14. Bid Withdrawal

A bidder may withdraw their bid up to the date and time specified for bid closing. Such a withdrawal must be completed in writing or facsimile, with attention to the HQ SACT Contracting Officer.

15. Bid Evaluation

(a) The evaluation of bids and determination as to the responsiveness and technical adequacy or technical compliance, of the products or services requested, shall be the responsibility of HQ SACT. Such determinations shall be consistent with the evaluation criteria specified in the RFP.

(b) HQ SACT is not responsible for any content that is not clearly identified in any proposal package.

(c) Proposals shall be evaluated and awarded based upon the proposal that represents the best value to NATO. The following factors are considerations:

1. Successful administrative submission of bid packages as requested paragraph 11, as listed in this RFP.
2. Successful determination of compliance with mandatory criteria. (Compliant/non-compliant)
3. Technical factors / pricing factors rated the following: **Technical / Price = 70/30**
4. Acceptance of HQ SACT General Terms and Conditions.

16. Proposal Clarifications

During the entire evaluation process HQ SACT reserves the right to discuss any bid with the order to clarify what is offered and interpretation of language within the bid, to resolve in potential areas of concern.

17. Award

(a) HQ SACT intends to award a **firm fixed price deliverables contract** to the Offeror whose proposal represents the **Best Value** offer to NATO. Partial awards shall not be considered.

(b) HQ SACT will collect information from references provided by the Offeror in regard to its past performance. Contractors must provide authorization to contact references.

(c) HQ SACT reserves the right to negotiate minor deviations to the listed General Terms and Conditions to this RFP.

18. Communications

All communication related to this RFP, between a prospective bidder and HQ SACT shall only be through the nominated HQ SACT Contracting Officer. Designated contracting staff shall assist the HQ SACT Contracting Officer in the administrative process. There shall be no contact with other HQ SACT personnel regarding this RFP. Such adherence shall ensure Fair and Open Competition with equal consideration and competitive footing leverage to all interested parties.

19. Points of Contact:

(PLEASE INCLUDE ALL BELOW ON ALL CORRESPONDENCE)

Margaret Anderson	Contracting Officer	757-747-3699	margaret.anderson@nato.int
Tonya Bonilla	Contracting Officer	757-747-3575	tonya.bonilla@nato.int
Louise Syms	Contracting Officer	757-747-3788	louise.syms@nato.int

Enclosure 1: Proposal Content / Checklist

PROPOSAL CONTENT / CHECKLIST

Table of Contents

- ☐ Bidder's name, address, POC, Contact numbers, email address.
- ☐ Compliance Statement.
- ☐ Past Performance (including References).
- ☐ Technical Proposal.
- ☐ Price Proposal
- ☐ Compliance matrix (See Annex B to Statement of Work).

Enclosure 2: Compliance Statement

COMPLIANCE STATEMENT TO SEALED BID RFP-ACT-SACT-25-64

It is hereby stated that our company has read and understands all documentation issued as part of RFP-ACT-SACT-25-64. Our company proposal submitted in response to the referenced solicitation is fully compliant with the provisions of RFP-ACT-SACT-25-64 and the intended contract with the following exception(s); such exemptions are considered non-substantial to the HQ SACT solicitation provisions issued.

Clause	Description of Minor Deviation
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Company:_____ Signature: _____

Name &Title:_____ Date: _____

Company Bid Reference: _____

Bidder's proposal must be based on full compliance with the terms, conditions and requirements of the RFP and all future clarifications and/or amendments. The bidder may offer variations in specific implementation and operational details provided that the functional and performance requirements are fully satisfied. In case of conflict between the compliance statement and the detailed evidence or explanation furnished, the detailed evidence/comments shall take precedence/priority for the actual determination of compliance. Minor or non-substantial deviations may be accepted. Substantial changes shall be considered non- responsive.

Enclosure 3: Past Performance Information Form

(Company is required to submit minimum of one – references may be submitted in lieu of past performance).

PAST PERFORMANCE INFORMATION FORM

Contracting Entity:

Contract No:

1. Type of Contract (Firm Fixed Price, IDIQ, Requirements):
2. Title of Contract:
3. Description of Work Performance and Relevance to Current Acquisition (Type of facility, capacity, estimated patronage, summary of staff used):
4. Contract Dollar Amount:
5. Period of Performance:
6. Name, Address, Fax and Telephone No. of Reference:
7. Indicate Whether Reference Acted as Prime or Sub-contractor:
8. Comments regarding compliance with contract terms and conditions:
9. Complete Contact Information for client:
10. Permission to contact client for reference: Yes/ No

Name/Signature of Authorized Company Official

_____

This Enclosure is designed to assist the respective company provide HQ SACT with all necessary documents/information required. For clarification, please refer to Bidding Instructions in part 1 of subject solicitation.

Enclosure 4: Price Proposal

SEALED BID PRICE PROPOSAL

SUBJECT: RFP-ACT-SACT-25-64

Please find on behalf of **(Insert: Company Name)** to provide HQ SACT with services (collectively referred as "ITEMS"), subject to the provisions, terms and conditions stated in RFP-ACT-SACT-25-64 and the "**Insert: Company Name Technical Proposal**", submitted in accordance with solicitation provisions.

Serial	**Activity**	**Price**
1	CONCEPT	$
2	DESIGN	$
3	IMPLEMENTATION	$
4	DEMONSTRATION AND REPORT	$
	TOTAL	$

Please verify and acknowledge propriety of above, by duly completing signatures below.

Authorizing Company Official:

Printed Name: _____

Position: _____

Title: _____

Authorizing Company (Signature): _____

Date: _____

Company Name Witness Official:

Printed Name: _____

Position: _____

Title: _____

Witness (Signature): _____

Date: _____

Annex A
STATEMENT OF WORK (SOW)
NATO Modeling and Simulation Courses Content Development

1. Introduction

The contractor shall develop a proof of concept demonstrating how Artificial Intelligence (AI) can be used to automate the Modelling and Simulation (M&S) lifecycle for analytical purposes. The Modelling, Simulation, and Learning Technologies (MSLT) Branch, part of the Allied Command Transformation's Multi-Domain Force Development Directorate, is responsible for overseeing current and future NATO M&S requirements.

2. Background and Scope of Work

a. Background

i. MSLT branch is charge of Emerging Disruptive Technologies (EDT) scanning that would inform development of NATO M&S requirement and in the broader scope the M&S scientific discipline itself. With ETDs horizon scanning completed in 2023, AI together with Digital Twins and Quantum Computing were identified as the future M&S critical enablers.

ii. AI has already demonstrated its value to M&S discipline in many isolated functionalities, however holistic approach to the AI use in M&S lifecycle has not been yet fully conceptualized and developed.

iii. The M&S life cycle for analytical purposes (M&S LC) consists of distinct phases that are loosely coupled. These phases do not follow a strict linear sequence; instead, feedback loops can restart previously initiated phases. Despite being a dynamic process, there is a general flow to these phases.

iv. Typically, the M&S LC begins with problem definition and requirements analysis, followed by the development of a conceptual model. Next, input data models are created to define the data structure of the problem domain. Afterward, a model implementation is developed in the form of executable software. The verification and validation (V&V) process ensures the model's accuracy and reliability. Finally, the design of scenario, experiments, simulation runs and output data analysis complete the cycle and provide the insights to the problems statement. Detailed description of the M&S LC is in the Annex C.

b. Scope of Work

i. The proof of concept is based on the hypothesis that advancements in Artificial Intelligence (AI), Big Data and increased Computational Power can enable automated execution of the M&S lifecycle, eliminating the need for human intervention. This proof of concept should clarify the limits in what automation is capable of. The work in this SOW consists of four discrete but connected phases culminating with a demonstration of AI role in the automation and specification of future NATO M&S AI driven requirements.

1. Phase #1: Conceptual phase to develop conceptual description of the overall approach to M&S LC automation with the AI problem domain agnostic.

2. Phase #2: Design phase to describe selected AI methods, tools and technologies and data sources needed to cover all phases of automated M&S LC based on the HQ SACT selected problem domain. The problem domain will be shared with contractor after the end of Phase #1.

3. Phase #3: Implementation phase to implement previous concepts and designs based on the results of Phase #1 and Phase #2.

4. Phase #4: Demonstration and final report to show the limits of automation of M&S LC.

ii. With the active participation and involvement of Headquarters Supreme Allied Command Transformation (HQ SACT), the contractor shall provide the future NATO AI driven M&S requirements in the final report.

3. Type of Contract and Period of Performance

a. Type of Contract: This is a firm fixed price deliverables contract.

b. Period of Performance: The contract period of performance is from ~~25 August~~ 15 September to 31 December 2025.

4. Tasking and Deliverables

All tasks and deliverables should be conducted in line with guidance provided by COTR. The following provides a summary of the deliverables.

a. Tasks

i. To develop conceptual description of the overall approach to M&S LC automation with the AI based problem domain agnostic.
ii. To describe selected AI methods, tools and technologies and data sources needed to cover design of all phases of automated M&S LC based on the HQ SACT selected problem domain.
iii. To implement concept and designs based on the previous tasks.
iv. To develop demonstration showing the current limits of automation of M&S LC and to provide the future NATO AI driven M&S requirements.

b. Deliverables and Schedule of Delivery

Serial	Activity	Deliverables	Deadline
1	Concept	**Conceptual Description of the M&S LC automation with AI.** This document describes a bigger picture how AI will be used in the proof of concept without knowing the problem statement. This document should be understandable M&S broader community without deeper knowledge on AI. All technical details will be later extended in #2 Design activity. Annex C shall be used as the main M&S refence to tasks to be automated or supported by AI.	Within 1 months after Contract Award and NLT ~~30 September~~ 15 October 2025
2	Design[1]	**AI support to M&S LS Design**. This document contains all technical and detailed description of selected AI methods, tools and technologies and data sources needed to cover design of all phases of automated M&S LC based on the HQ SACT selected problem domain. In the beginning of this activity HQ SACT will decide on a problem domain that would drive the design. The problem domain will be composed of: • a textual description of a problem domain {the problem domain will fit into the context of operational level decision making supporting current NATO or close future MDO operations} • a problem statement identifying the selected issue/question within the problem domain to be	NLT ~~31 October~~ 10 November 2025

[1] Desing must not include already developed M&S solutions! Products of M&SLC activities must not be developed using already implemented conceptual or executable models or their libraries, simulation systems, constructive or virtual simulations, computer generated forces (CGFs) or platforms to developed/implement simulation with already templated conceptual or executable models.

		answered by simulation execution Annex C shall be used as the main M&S refence to tasks to be automated or supported by AI.	
3	Implementation[2]	**Implementation**. The contractor will implement concept and design based on the results of #1 Activity and #2 Activity.	NLT ~~5~~ 12 December 2025
4	Demonstration and report	**Proof of concept Demonstration and Final Report.** During the proof of concept demonstration to HQ SACT is required to show the current limits in the automation/support of AI, if any. Final Report must contain Lessons Identified, current limits with AI support to M&S LC, future NATO AI driven M&S requirements and Key Performance Indicators (KPIs) used to evaluate the success of the M&S requirements implementation.	NLT ~~18~~ 31 December 2025

5. Acceptance Criteria

Acceptance criteria for each deliverable will be in line with the guidance provided by COTR. These will be established in detail at the Kick-Off meeting, in consultation with the stakeholders. Part of any bid should provide estimate of output and work against each deliverable to enable effective and collaborative establishment of deliverable acceptance criteria.

a. The Contracting Officer Technical Representative (COTR) is responsible to:

i. Resolve outstanding disputes, problems, deficiencies, and/or questions on the technical aspects of the SOW;

ii. Review and approve all Contractor outputs/products for completeness and accuracy;

iii. The COTR shall review the Contractor's work at regular intervals as required. The COTR's written approval of work reported, and deliverables submitted is mandatory for Contractor invoices to be successfully processed.

[2] Implementation must not include already developed M&S solutions! Products of M&SLC activities must not be developed using already implemented conceptual or executable models or their libraries, simulation systems, constructive or virtual simulations, computer generated forces (CGFs) or platforms to developed/implement simulation with already templated conceptual or executable models. It is expected to implement closed loop simulation with stochastic features.

iv. The COTR/D-COTR shall receive a letter of appointment from the Contracting officer that describes in detail his/her roles and responsibilities to which he/she shall sign formal acceptance.

6. Contractor Performance Requirements and Reporting

a. The Contractor shall report to the COTR and the Contracting officer, detailing progress on the SOW for the reporting period. The report shall include, but not be limited to, the following information:

b. Summary of work (by contractor position) for tasking and deliverables for the reporting period.

c. Current or anticipated problems/deficiencies and recommended solution.

d. The COTR may amend the reporting requirements to receive alternate and/or additional data and information on a more frequent or less frequent basis and may request other reports that detail designated aspects of the work or methods to remedy problems and deficiencies. The Contracting Officer shall receive at least one monthly report, regardless of COTR changes. However, note that the report is NOT a deliverable subject to acceptance.

7. Proof of Past Performance

Minimum of one past performance citations within the last seven years to show that it has successfully completed work that is similar to or directly traceable to the requirements outlined in this SOW

8. Place of Performance

Work under this contract will be conducted at the contractor's premises, including virtual meetings with HQ SACT.

9. Physical Security

a. Personnel Clearances: The work will only contain unclassified information, NATO clearance is not needed, but preferable.

b. Security Conditions: Contractor personnel shall comply with all the local host nation, NATO security provisions and other policies and procedures, as required.

c. Electronic Devices: The Contractor shall abide by the security restrictions regarding carrying and using electronic devices (e.g., laptops, cell phones) in the

HQ SACT. The Contractor shall be responsible for staying the necessary clearance from the HQ SACT Security Office before bringing any such device into the HQ SACT work. If required, as determined by the COTR, HQ SACT may provide access to NATO ICT capabilities, but otherwise, the contractor will provide their own equipment.

Annex B
Requirements Matrix

SER	ITEM	COMPLIANT	NOT COMPLIANT
1	Contractor is national of NATO Member nation.		
2	Contractor possesses a master's degree in M&S. Alternatively, he/she can demonstrate 5 years' professional experience in M&S domain.		
3	Contractor has minimum of 2 years of experience in the field of military M&S.		
4	Contractor has minimum of 3 years of experience in analytical M&S.		
5	Contractor has minimum of 2 years of experience in applied AI.		
6	Must score a minimum of **65** points to be technically acceptable.		
SER	**CRITERIA**	**RANGE** (Note: any score of 0 is non compliant)	**SCORE COMPLIANT (Out of 100 pts)**
7	Experience with the military M&S domain	No experience or familiarity: 0 Familiar with theory and practical experience <=5 years: 1-5 Practical experience >5 years: 6-10	
8	Experience with analytical M&S in last 5 years.	No experience: 0 # of previous M&S Analytical Studies with references <=5: 1-5 # of previous M&S Analytical Studies with references >5: 6-10	
9	Experience with applied AI in last 5 years.	No experience: 0 # of previous applied AI projects with references <=5: 1-5 # of previous applied AI projects with references >5: 6-10	
10	Describe how you want to use AI to address tasks 1.1, 1.2, 1.3 (Annex C #1 Problem Definition & Requirements Analysis)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	
11	Describe how you want to use AI to address tasks 2.1, 2.2, 2.3 (Annex C #2 Conceptual Model Development)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	
12	Describe how you want to use AI to address tasks 3.1, 3.2, 3.3 (Annex C #3 Model Design)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	
13	Describe how you want to use AI to address tasks 4.1, 4.2, 4.3 (Annex C #4 Model Implementation)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	

14	Describe how you want to use AI to address tasks 5.1, 5.2 (Annex C #5 Verification and Validation)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	
15	Describe how you want to use AI to address tasks 6.1, 6.2, 6.3, 6.4, 6.5 (Annex C #6 Experimentation and Analysis)	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	
16	Describe how you want to use AI to address tasks 7.1 (Annex C #7 Maintenance and Evolution	0 points - no idea how to use AI to support these tasks 1-5 points- some ideas on the tasks 6-10 points – all tasks explicitly covered by AI support	

Annex C
Detailed Modelling and Simulation Life cycle for analytical purposes (Tasks to be automated/ supported by AI)

1. Problem Definition & Requirements Analysis

1.1 Identify the objectives of the simulation.

1.2 Define key requirements, constraints, and stakeholders.

1.3 Establish performance measures (Key Performance Indicators-KPI, Measure of Effectiveness- MoE, Measure of Performance - MoP) relevant to the problem statement.

2. Conceptual Model Development

2.1 Develop an abstract representation of the system or problem.

2.2 Identify key entities, processes, and interactions.

2.3 Define assumptions, simplifications, and scope.

3. Model Design

3.1 Translate the conceptual model into a structured design.

3.2 Choose appropriate modelling techniques (e.g., discrete event, agent-based, system dynamics or different).

3.3 Define input parameters, algorithms, and data structures.

4. Model Implementation

4.1 Develop the model/s using programming languages (If more models developed, implement their integration).

4.2 Integrate necessary data sources and computational methods.

4.3 Optimize for performance and scalability.

5. Verification & Validation (V&V)

5.1 Verification: Ensure the model/s is/are built correctly (debugging, code reviews, unit testing).

5.2 Validation: Ensure the model/s accurately represents the real-world system (comparing outputs with empirical data).

6. Experimentation & Analysis

6.1 Develop the scenario (in accordance with doctrine: Blue, Red and Green/White) that reflects the current or future operating environment

6.2 Design of experiment to cover the problem statement and KPI

6.3 Conduct simulation runs and sensitivity analysis based on a design of the experiment.

6.4 Interpret results and assess the model's/models' effectiveness.

6.5 Identify areas for improvement.

7. Maintenance & Evolution

7.1 Update the model/s based on new data, technologies, or requirements.