AJJ Research

RR-Ethics™ / HERI Ethical Readiness Framework and Embodied AI Humanoid Eldercare Robotics Research

Public-Facing Q&A for Government Agencies, Eldercare Institutions, Medical Professionals, Engineers, Investors and Interested Readers

Related Technical Paper

RR-Ethics™: A Human-Centred Ethical Readiness Index for Responsible Deployment of Embodied AI Humanoid Eldercare Robotics — A Systems-Oriented HERI Framework for Legal Accountability, Safety Boundaries, Public Health Protection and Institutional Deployment Governance

Related DOI: [to be assigned upon DOI registration]
DOI URL: 10.5281/zenodo.21002067, https://zenodo.org/records/21002067
Document type of related paper: Company-led technical preprint / technical disclosure for DOI registration
Status of related paper: Public research version; not independently peer-reviewed; not a journal article or final peer-reviewed publication

Status of this Q&A

This Q&A is a public-facing explanatory note prepared to help readers understand the RR-Ethics™ framework, the Humanoid Eldercare Robotics Ethical Readiness Index ("HERI") and the related technical report. This Q&A itself is not a peer-reviewed journal article, regulatory filing, clinical validation report, ethics approval document, legal opinion, medical-device certification document, product-clearance document, commercial valuation, investment recommendation or institutional deployment approval.

Executive Summary

RR-Ethics™ / HERI is a company-developed, non-peer-reviewed ethical-readiness research and planning framework for assessing whether an embodied AI humanoid eldercare robot may be considered supportable for controlled institutional deployment review under defined operating conditions, evidence boundaries, human-supervision requirements and institutional safeguards.

The core output of the framework is the Humanoid Eldercare Robotics Ethical Readiness Index ("HERI"), a structured ethical-readiness index supported by ten assessment dimensions, evidence-maturity scoring, weighted assessment, critical-dimension floors, evidence-to-score mapping and readiness-level interpretation.

HERI should not be interpreted as ethics approval, regulatory approval, clinical validation, medical-device certification, product clearance, legal advice, government endorsement, institutional endorsement, commercial valuation, investment advice, sales forecast or universal deployment readiness.

Correct Interpretation	Incorrect Interpretation
Ethical-readiness assessment framework	Ethics approval or IRB/DSRB approval
HERI structured ethical-readiness index	Regulatory approval score or product certification
Evidence-linked decision-support framework	Automatic deployment permission
Critical-dimension floor and stage-gate logic	Simple pass/fail approval mechanism
First-definition-type and early integrated framework positioning	Legally confirmed world-first claim
Pioneer-developer evidence boundary	Independent third-party validation
Public-facing explanatory Q&A	Peer-reviewed journal article

First-Definition-Type Positioning Statement

Based on public-source searches conducted up to 22 June 2026, no highly identical integrated ethical-readiness index framework was identified within the reviewed scope. Accordingly, RR-Ethics™ / HERI may be described as a first-definition-type and early integrated ethical-readiness framework for responsible deployment of embodied AI humanoid eldercare robotics, subject to future academic, ethical, regulatory and public-source developments.

This wording should not be interpreted as a legally confirmed world-first claim, regulatory recognition, independent third-party validation or final academic determination of global uniqueness. It is a cautious research-positioning statement based on the reviewed public-source and comparator literature scope.

The purpose of this positioning statement is to help readers understand the research contribution of RR-Ethics™ / HERI while preserving appropriate evidence, validation, regulatory and academic boundaries. It should be read together with the related technical report, the evidence-boundary statements and the limitations described in this Q&A.

Purpose of this Q&A

This Q&A is prepared as a public-facing explanatory note for readers of the RR-Ethics™ / HERI framework and related embodied AI humanoid eldercare robotics research. It is intended to help government agencies, healthcare and eldercare institutions, medical professionals, engineers, governance reviewers, investors and other interested readers understand the purpose, scope, methodology, evidence boundary and interpretation limits of the RR-Ethics™ / HERI framework.

RR-Ethics™ / HERI should be understood as a company-led, non-peer-reviewed research paper, technical disclosure and ethical-readiness planning framework for responsible deployment assessment of embodied AI humanoid eldercare robots. It should not be interpreted as ethics approval, clinical validation, regulatory approval, medical-device certification, product clearance, government endorsement, institutional endorsement, investment advice, commercial valuation, sales forecast or universal deployment permission.

1. What is RR-Ethics™?

Q1. What is the purpose of the RR-Ethics™ framework?

RR-Ethics™ is an ethical-readiness and institutional decision-support framework designed for the responsible assessment of embodied AI humanoid eldercare robots before controlled institutional deployment.

Its purpose is not to determine whether a robot can perform isolated technical functions. Instead, RR-Ethics™ evaluates whether the ethical, legal, governance, safety, public-health, workplace-safety, accountability and human-oversight safeguards surrounding deployment are sufficiently evidenced and reviewable.

In simple terms, RR-Ethics™ asks: Is the robot ethically ready for controlled use in a defined eldercare institution, under defined functions, evidence boundaries and human-supervision conditions?

RR-Ethics™ is therefore an ethical-readiness framework. It is not ethics approval, legal advice, regulatory approval, clinical validation, product certification or deployment authorisation.

2. What is HERI?

Q2. What does HERI mean?

HERI means Humanoid Eldercare Robotics Ethical Readiness Index.

It is the core structured output of the RR-Ethics™ framework. HERI is designed to support assessment of whether an embodied AI humanoid eldercare robot may be considered ethically ready for controlled institutional deployment review under defined operating conditions and evidence boundaries.

HERI does not certify the robot. It does not approve deployment. It does not prove clinical effectiveness. It is a structured ethical-readiness assessment indicator.

The correct interpretation is: HERI is an ethical-readiness assessment framework for controlled institutional deployment review, not a regulatory approval score, clinical validation score or product-certification score.

3. What exactly does HERI assess?

Q3. What is the exact output measured by the RR-Ethics™ / HERI framework?

RR-Ethics™ / HERI assesses ethical-readiness support for controlled institutional deployment review.

The framework considers whether key ethical and institutional conditions are sufficiently supported by evidence, including dignity and personhood protection; consent, autonomy and proxy safeguards; privacy and data proportionality; safety and medical boundary control; human oversight and override; legal accountability and responsibility chain; auditability and traceability; public health and workplace safety; emotional dependency and substitution control; and caregiver justice, training and workflow fairness.

RR-Ethics™ / HERI does not measure or prove regulatory approval, clinical validation, medical-device certification, product clearance, government endorsement, institutional endorsement, commercial revenue, investment return, universal deployment readiness or universal safety.

The output should be interpreted as a framework-derived, evidence-bounded ethical-readiness assessment under defined institutional, operational, data-governance, safety and human-supervision assumptions.

4. What are the main dimensions of HERI?

Q4. What are the ten HERI assessment dimensions?

HERI V1.0 assesses ethical readiness through ten dimensions: dignity and personhood protection; consent, autonomy and proxy safeguards; privacy and data proportionality; safety and medical boundary control; human oversight and override; legal accountability and responsibility chain; auditability and traceability; public health and workplace safety; emotional dependency and substitution control; and caregiver justice, training and workflow fairness.

The purpose of using multiple dimensions is to avoid over-reliance on a single factor such as technical capability, user interest, commercial potential or operational convenience.

The correct interpretation is: HERI is designed to assess an ethical deployment system, not merely a robot product.

5. What does "ethical readiness" mean?

Q5. What is meant by ethical readiness in RR-Ethics™ / HERI?

Ethical readiness means that a deployment setting has sufficient ethical evidence, safeguards and review mechanisms to support controlled institutional deployment review.

It includes questions such as: Are dignity and personhood protected? Are consent and proxy-consent pathways defined? Are privacy and data practices proportionate? Are safety and medical boundaries documented? Can humans supervise and override robot-supported workflows? Are accountability and responsibility chains clear? Can readiness claims be audited? Are public health, workplace safety and caregiver fairness considered?

Ethical readiness does not mean that deployment is automatically approved. It means that the deployment may be considered supportable for further institutional review, pilot assessment or ethical-readiness discussion under defined boundaries.

The correct interpretation is: ethical readiness is a structured pre-deployment and deployment-assessment concept, not an approval outcome.

6. How should a HERI score be interpreted?

Q6. How should a numerical HERI result be interpreted?

A numerical HERI result should be interpreted as a framework-derived ethical-readiness assessment under defined assumptions, weighting, evidence scope and critical-floor requirements.

A relatively high HERI score may indicate that the assessed deployment has stronger evidence support across the ten HERI dimensions. However, the score should not be interpreted mechanically.

A deployment may achieve a relatively high aggregate score but still remain ethically unready if critical safeguards in areas such as safety, human oversight, privacy, legal accountability or auditability are insufficient.

The safe interpretation is: a HERI result indicates an evidence-linked ethical-readiness finding within the defined framework and evidence boundary. It does not approve deployment.

7. What does the HERI threshold mean?

Q7. Does reaching a HERI readiness level mean the robot can be deployed?

No.

A readiness level in HERI is an ethical-readiness interpretation point. It helps distinguish whether the assessed case may be considered more or less ready for further institutional assessment, pilot planning or remediation.

Reaching a threshold does not mean that the robot is approved, deployment is authorised, clinical use is validated, regulatory clearance is obtained, institution-specific approval is granted, or risks have been eliminated.

The correct interpretation is: a HERI readiness level may support further review, but it does not replace regulatory, institutional, clinical, ethical, data-protection, legal or operational approval processes.

8. What are critical-dimension floors?

Q8. Why does HERI use critical floors?

HERI uses critical-dimension floors to prevent strengths in one area from offsetting critical weaknesses in another.

For example, strong documentation, user acceptance or institutional interest should not compensate for unresolved weaknesses in safety, human oversight, privacy, accountability or auditability.

The critical-floor design is intended to ensure that essential ethical safeguards cannot be hidden by high scores elsewhere.

The correct interpretation is: critical floors are designed to protect safety, oversight, privacy, accountability and auditability from being overridden by operational or commercial strengths.

9. Is HERI a clinical study?

Q9. Does HERI constitute clinical validation?

No.

HERI is not a clinical trial, clinical validation report, medical diagnosis study, treatment evaluation or resident outcome study.

It does not claim to prove clinical effectiveness, medical treatment benefit, resident health improvement, diagnostic accuracy, therapeutic value or clinical safety clearance.

HERI is an ethical-readiness and deployment-assessment framework. If future studies involve identifiable residents, health data, clinical outcomes or vulnerable human participants, separate ethics review, consent procedures, data-protection safeguards and regulatory review would be required.

10. Is HERI a regulatory approval or product certification?

Q10. Does HERI approve the robot for deployment?

No.

RR-Ethics™ / HERI does not constitute or replace regulatory approval, medical-device clearance, product certification, clinical evaluation, institutional ethics review, data-protection assessment, legal review, professional care judgment or site-specific deployment approval.

The framework may support planning, internal review, institutional discussion, ethical-readiness reference and future validation, but it does not authorise deployment.

The correct interpretation is: RR-Ethics™ / HERI provides a structured ethical-readiness assessment framework. It does not constitute regulatory approval, clinical validation, medical-device certification or institutional deployment approval.

11. Is HERI a legal opinion or compliance certification?

Q11. Does HERI provide legal or compliance clearance?

No.

HERI may help organise legal-accountability and compliance-related assessment questions, but it is not a legal opinion, regulatory opinion, statutory clearance, compliance certificate or professional assurance report.

Any actual deployment, procurement, regulatory submission or institutional adoption should still be separately reviewed by appropriate legal, regulatory, clinical, technical, operational, ethics and data-protection professionals.

The safe interpretation is: HERI supports structured ethical-readiness and accountability discussion, but it does not replace legal advice, regulatory review or institutional approval.

12. Is HERI a literature review or prior-art search?

Q12. How is HERI related to public-source and prior-art review?

HERI is not merely a literature review. It is an ethical-readiness framework supported by comparator literature and public-source review.

The related public-source and prior-art review helps position RR-Ethics™ / HERI within existing AI ethics, care-robot ethics, healthcare AI governance, robot accountability, social-robot ethics and eldercare deployment discussions.

The prior-art review does not prove absolute global uniqueness. Rather, it supports a cautious research-positioning statement that no highly identical public integrated ethical-readiness index framework was identified within the reviewed public-source scope at the time of the search.

The correct interpretation is: public-source search supports cautious framework positioning; it does not constitute legal confirmation of global uniqueness.

13. What does “first-definition-type” mean?

Q13. Why does AJJ describe RR-Ethics™ / HERI as a first-definition-type framework?

Based on public-source searches conducted up to 22 June 2026, no highly identical integrated ethical-readiness index framework was identified within the reviewed scope. Accordingly, RR-Ethics™ / HERI may be described as a first-definition-type and early integrated ethical-readiness framework for responsible deployment of embodied AI humanoid eldercare robotics, subject to future academic, ethical, regulatory and public-source developments.

This does not mean legally confirmed world-first, globally unique without qualification, regulatory-recognised first ethical standard, academically final world-first determination or independent third-party validation.

The safe wording is: To the best of the Group’s knowledge, and based on public-source searches conducted to date, RR-Ethics™ / HERI may be described as a first-definition-type and among the earliest identified integrated ethical-readiness assessment frameworks for responsible deployment of embodied AI humanoid eldercare robotics.

14. What are the early integrated framework characteristics of HERI?

Q14. Can HERI be described as having early integrated framework characteristics?

Yes, cautiously.

HERI may be described as having early integrated framework characteristics within the reviewed public research landscape, based on public-source searches conducted to date and subject to the stated evidence boundaries.

These characteristics include ten-dimensional ethical-readiness assessment; 0–5 evidence-maturity scoring; weighted readiness assessment; critical-dimension floors; readiness-level interpretation; evidence-to-score mapping; auditability; embodied AI humanoid eldercare robotics context; and integration of dignity, consent, privacy, safety, oversight, accountability, public health, emotional dependency and caregiver fairness.

This should not be interpreted as an absolute legal, regulatory or academic confirmation of global uniqueness.

15. What is the pioneer-developer evidence boundary?

Q15. How should readers understand the AJJ × Huaxi Technology context?

HERI V1.0 was developed within a bounded pioneer-developer context involving AJJ Healthcare Management and Hangzhou Huaxi Intelligent Technology.

This context may provide practical deployment-related observations, system-level analysis and early evidence categories that informed the framework. However, it should not be treated as independent validation, regulatory certification, clinical proof, market assurance or proof of universal deployment suitability.

The correct interpretation is: pioneer-developer evidence can support early framework development, but future independent validation, expert review, inter-rater reliability testing, multi-site evaluation and external benchmarking remain necessary.

16. How should government agencies and eldercare institutions read HERI?

Q16. What is the relevance for public-sector and institutional readers?

Government agencies and eldercare institutions may read HERI as a structured framework for thinking about responsible ethical-readiness assessment of embodied AI humanoid eldercare robots.

It may support discussion on ethical-readiness review; dignity, consent and privacy safeguards; safety and medical boundaries; human oversight; public health and workplace safety; caregiver training; evidence collection; auditability; accountability; and future pilot design.

It should not be used as a substitute for official policy decisions, regulatory assessment, procurement due diligence, clinical evaluation, data-protection review, ethics review or institution-specific approval.

17. How should engineers and technical teams read HERI?

Q17. What does HERI mean for engineering teams?

For engineers and technical teams, HERI highlights that responsible deployment of embodied AI eldercare robots is not only a question of technical capability. It is also a question of whether the system can be safely bounded, supervised, documented, audited, explained and integrated into institutional care workflows.

Engineering teams may use HERI to consider permitted-task lists, restricted functions, safety boundaries, human override, escalation pathways, audit logs, traceability, data minimisation, data retention, incident reporting, maintenance ownership and post-deployment monitoring.

The framework encourages technical teams to design systems that are not only functional, but also ethically bounded, reviewable and institutionally accountable.

18. How should medical and care professionals read HERI?

Q18. What does HERI mean for medical and care professionals?

Medical and care professionals should interpret HERI as an ethical-readiness and safety-boundary framework, not as a replacement for professional care judgment.

The framework may help care professionals consider whether human supervision is clearly defined; whether the robot's role is bounded; whether residents or authorised representatives can understand and control participation; whether staff remain responsible for care decisions; whether escalation pathways exist; whether public health and workplace safety are addressed; and whether emotional dependency or human-care substitution risks are monitored.

HERI does not claim that robots replace human empathy, nursing judgment, clinical assessment, emergency response, medical responsibility or professional accountability.

19. Why is HERI relevant to investors and shareholders?

Q19. Why does HERI matter if it is not approval or commercial validation?

HERI is relevant because it provides a structured research foundation for responsible AI-enabled eldercare robotics deployment assessment.

Its value lies in helping the Group develop an explainable, auditable and evidence-linked ethical-readiness language for responsible embodied AI eldercare robotics.

Its relevance also lies in creating an ethical-readiness assessment language; clarifying how institutional deployment safeguards may be assessed; reducing the risk of unsupported commercial or deployment claims; supporting future engagement with institutions, regulators, healthcare operators and technology partners; strengthening the company's research positioning in responsible AI, auditability, governance and human oversight; and supporting future peer-reviewed research and institutional pilot design.

However, HERI should not be presented as proof of revenue, regulatory approval, guaranteed deployment, clinical approval, confirmed adoption or commercial success.

20. Can HERI be submitted to a peer-reviewed journal later?

Q20. Can the framework later be developed into a journal manuscript?

Potentially yes, subject to the target journal's policies.

Any future journal submission should disclose any prior public company website version or DOI; explain that the prior version was a non-peer-reviewed technical preprint or technical disclosure; substantially revise and strengthen the manuscript; add further scholarly value; include stronger methodology, literature positioning, validation design, reliability assessment, sensitivity analysis or independent review where applicable; and comply with the journal's prior-publication and preprint policy.

The company website version should not describe itself as a journal article, accepted manuscript, final publication, regulatory approval or product-clearance document.

21. What are the main limitations of HERI?

Q21. What should readers keep in mind?

The key limitations are that the current version is not independently peer-reviewed unless later accepted by a journal; HERI is a framework-derived ethical-readiness assessment, not an approval decision; the result depends on defined assumptions, evidence scope and weighting; local institutional review remains necessary; regulatory, clinical, legal, ethics and data-protection review remain separate; evidence quality depends on source-record completeness and reviewability; critical floors require careful interpretation; multi-site validation remains necessary; independent assessor review would strengthen credibility; clinical effectiveness and resident outcome improvement are not established by HERI alone; and commercial viability, revenue generation and financial performance are not established by HERI alone.

These limitations should be treated as part of responsible public disclosure, not as issues to hide.

22. What should not be concluded from HERI?

Q22. What interpretations should readers avoid?

Readers should avoid concluding that RR-Ethics™ / HERI is ethics approval, regulatory approval, product certification, clinical validation, medical-device clearance, legal opinion, commercial valuation, investment recommendation, guaranteed deployment, confirmed adoption, government endorsement, institutional endorsement, proof of resident outcome improvement, proof of commercial success, or legally confirmed global uniqueness.

Readers should also avoid concluding that one HERI result applies to all institutions, all robot functions, all software versions or all jurisdictions without local review.

Preferred interpretation: RR-Ethics™ / HERI is a framework-derived, evidence-bounded ethical-readiness assessment model under defined assumptions, critical-floor logic and institutional review boundaries.

23. What is the safest one-sentence summary?

Q23. How should RR-Ethics™ / HERI be summarised?

The safest one-sentence summary is:

RR-Ethics™ / HERI is a company-developed, non-peer-reviewed ethical-readiness research and planning framework that uses ten assessment dimensions, evidence-maturity scoring, weighted assessment and critical-dimension floors to support responsible deployment review of embodied AI humanoid eldercare robots under defined evidence and supervision boundaries, but it does not constitute ethics approval, regulatory approval, clinical validation, medical-device certification, product clearance, commercial valuation or universal deployment permission.

Public-Facing Conclusion

RR-Ethics™ / HERI is proposed as a structured ethical-readiness assessment framework for embodied AI humanoid eldercare robots. It is intended to support responsible discussion among care institutions, engineers, healthcare professionals, governance reviewers, researchers, public-sector stakeholders and interested investors.

Its contribution is to translate dignity protection, consent and autonomy safeguards, privacy proportionality, safety boundaries, human oversight, accountability, auditability, public health, workplace safety, emotional dependency control and caregiver fairness into a framework-level, weighted and evidence-linked ethical-readiness assessment.

Any HERI result should be interpreted only within its stated assumptions, evidence boundary, weighting structure, critical-floor logic and institutional review context. It indicates a possible ethical-readiness finding for further assessment, not ethics approval, regulatory approval, clinical validation, product certification, commercial valuation, government endorsement, institutional endorsement or universal deployment readiness.

Final Public Interpretation Statement

RR-Ethics™ / HERI should be understood as:

a framework-level ethical-readiness and responsible deployment assessment model, not ethics approval, regulatory approval, clinical validation, product certification, deployment authorisation or commercial valuation.