

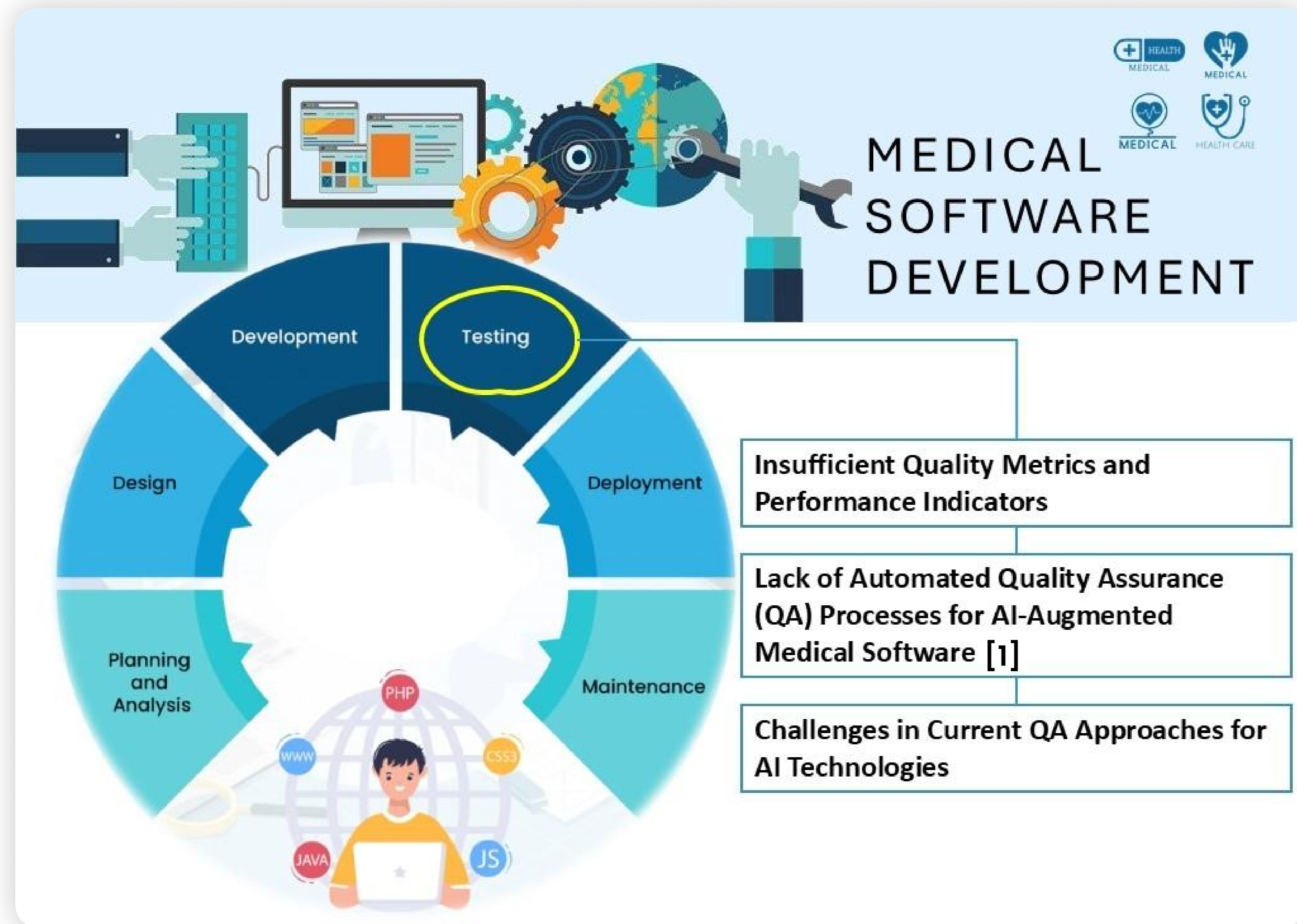
AUTOMATED QUALITY ASSURANCE PROCESS USING MULTI-PARAMETER AI MODEL FOR MEDICAL SOFTWARE IN BRAIN HEALTH

AUTHORS

QAISER KHAN, PANTEA KEIKHOSROKIANI
NIRNAYA TRIPATHI, MINNA ISOMURSU
Qaiser.Khan@Oulu.fi



1 PROBLEM STATEMENT



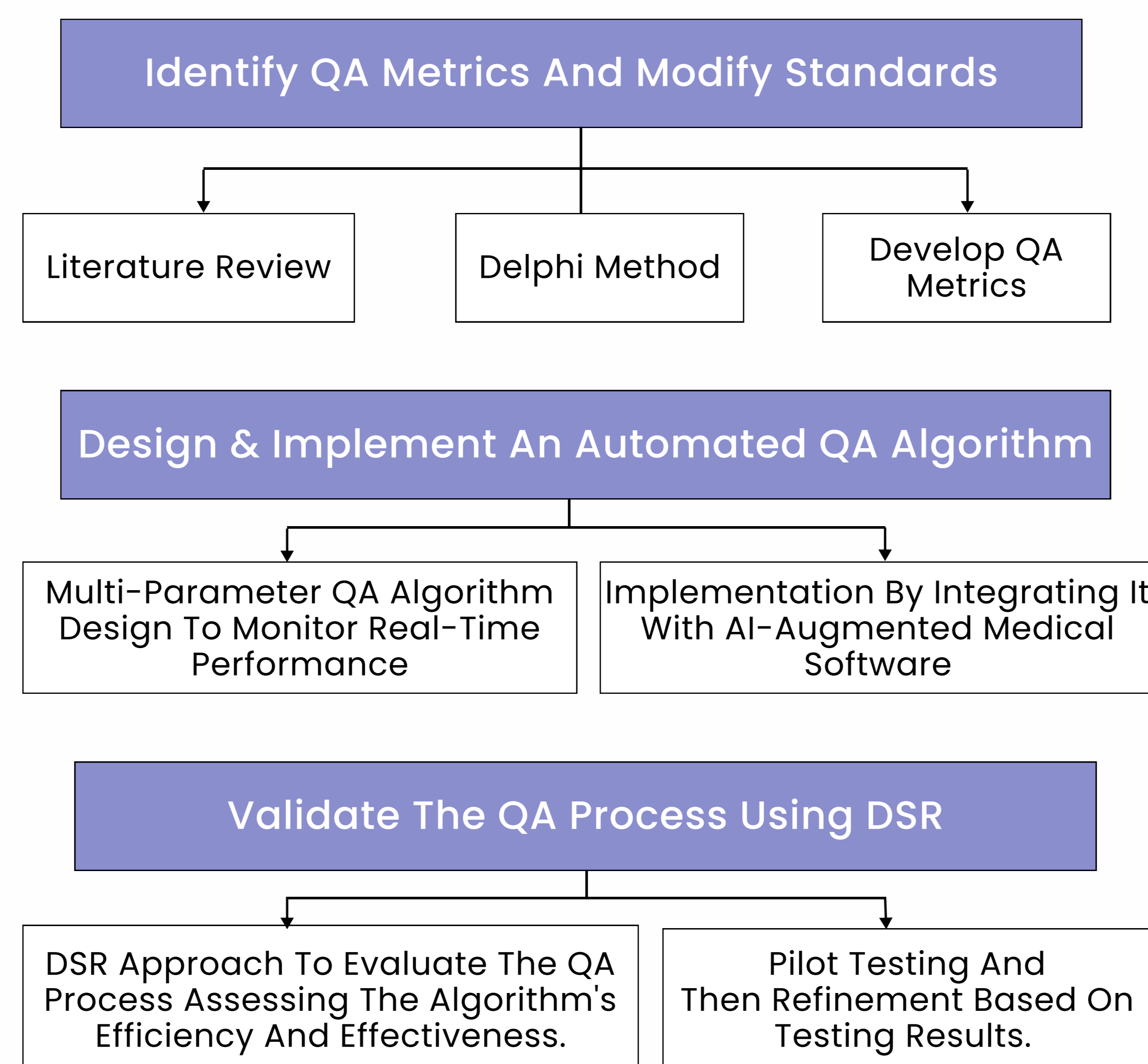
2 RESEARCH QUESTIONS

RQ1: What are the key QA metrics for AI-augmented medical software, and how can existing standards be adapted for AI-specific challenges? [2]

RQ2: How can an automated QA algorithm be designed to monitor real-time performance while meeting regulatory standards?

RQ3: How can the efficiency and effectiveness of the QA process for AI-augmented medical software be validated using Design Science Research?

3 METHODOLOGY



5 CONCLUSION

- » Bridge the gap between the theoretical benefits of AI in healthcare and the practical challenges of integrating AI technologies into clinical practice.
- » Develop a robust automated QA process for safe and effective AI implementation in medical software.

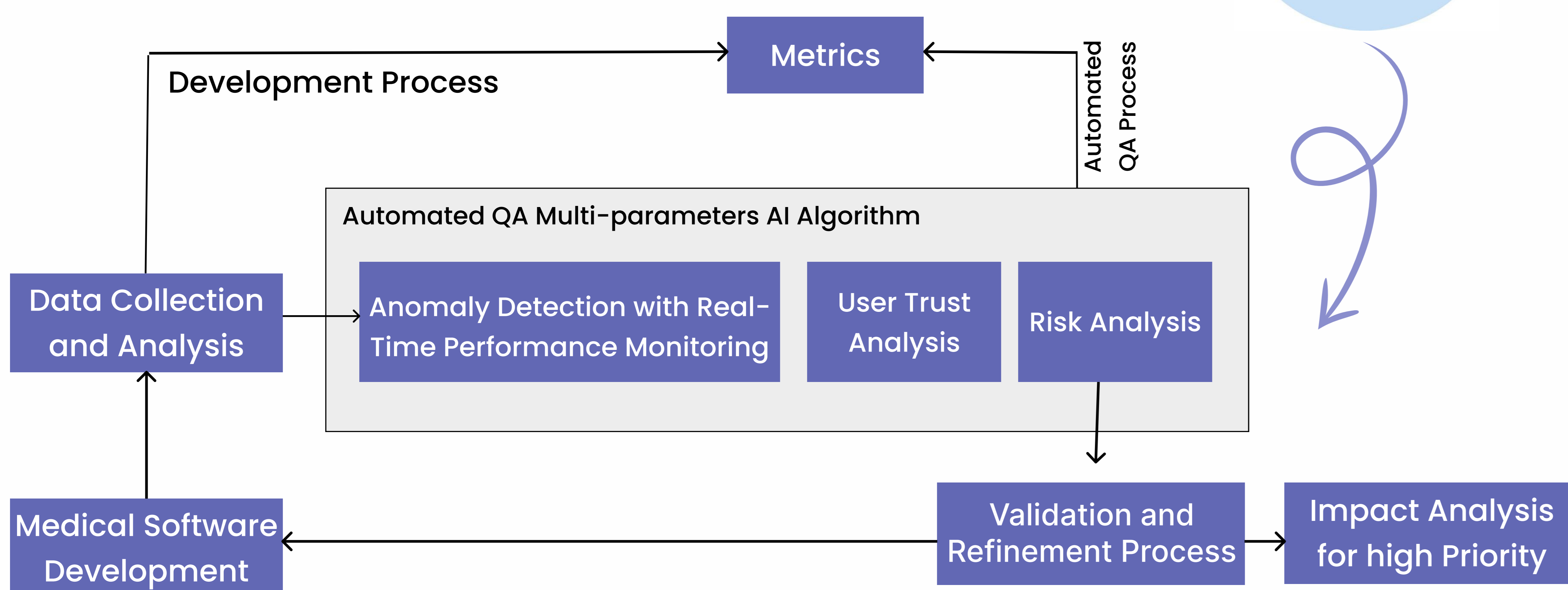
6 REFERENCES

1. D. W. Bates, S. Jha, and M. P. Kuperman, "How can Health Information Technology Improve Patient Safety and Quality?," *Journal of Quality in Health Care*, vol. 22, no. 4, pp. 34-40, 2020.
2. F. Magrabi, M. Aarts, and E. Coiera, "Identifying and Addressing Critical Safety Issues for Health Information Technology: A Qualitative Study," *International Journal of Medical Informatics*, vol. 90, no. 1, pp. 8-15, 2016.

4 EXPECTED RESULTS

- » Defined AI-specific QA metrics
- » Multi-parameters Automated QA AI algorithm
- » Validated QA process

AUTOMATED QA PROCESS



Integrating Quality Assurance in AI-Driven Brain Health Solutions: Focus on White Matter and EpiDigi.

