



Making innovative methods matter: **Big data and artificial intelligence in impact evaluation**

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3ie: Who we are & what we do



3ie is an international NGO promoting **evidence-informed development** policies and programs (3 offices, 75+ staff)



3ie is supporting the **production, synthesis, uptake** and **use** of contextually relevant, high-quality development evidence



We work closely with **governments, foundations, development institutions, NGOs** and other partners working in low- and middle-income countries to address their decision-making needs and help strengthen their evidence-systems



We have supported evaluations in more than **50 countries** on topics spanning the **full range of development sectors**, including education, health, social protection, peacebuilding, women's economic empowerment and governance

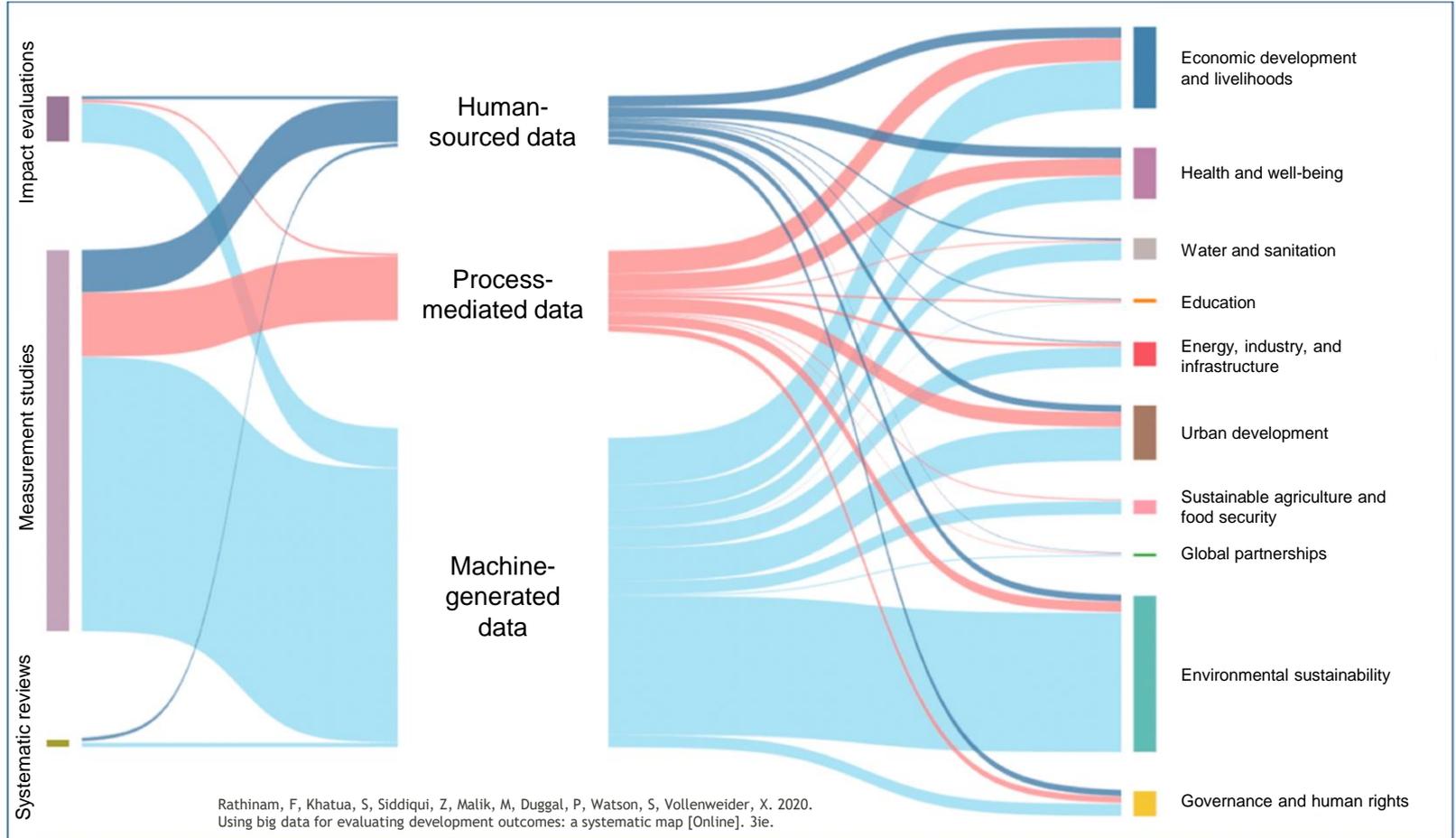


3ie is dedicated to **partnerships** and continuously **pushing the frontiers** to improve the reliability, relevance and use of evidence and contribute to global public goods





CEDIL-funded big data systematic map



Rathinam, F, Khatua, S, Siddiqui, Z, Malik, M, Duggal, P, Watson, S, Vollenweider, X. 2020. Using big data for evaluating development outcomes: a systematic map [Online]. 3ie.





Big data and AI applications in impact evaluation

Big data sources (illustrative)		Artificial intelligence approaches (illustrative)	
Social media	Radio call-in programs, citizen reporting	Machine learning and deep learning	Computer vision
Mobile phone data	Administrative records	Natural language processing	Predictive analytics
Remote sensing/ Earth observation	Web data	Data integration	Decision-making algorithms



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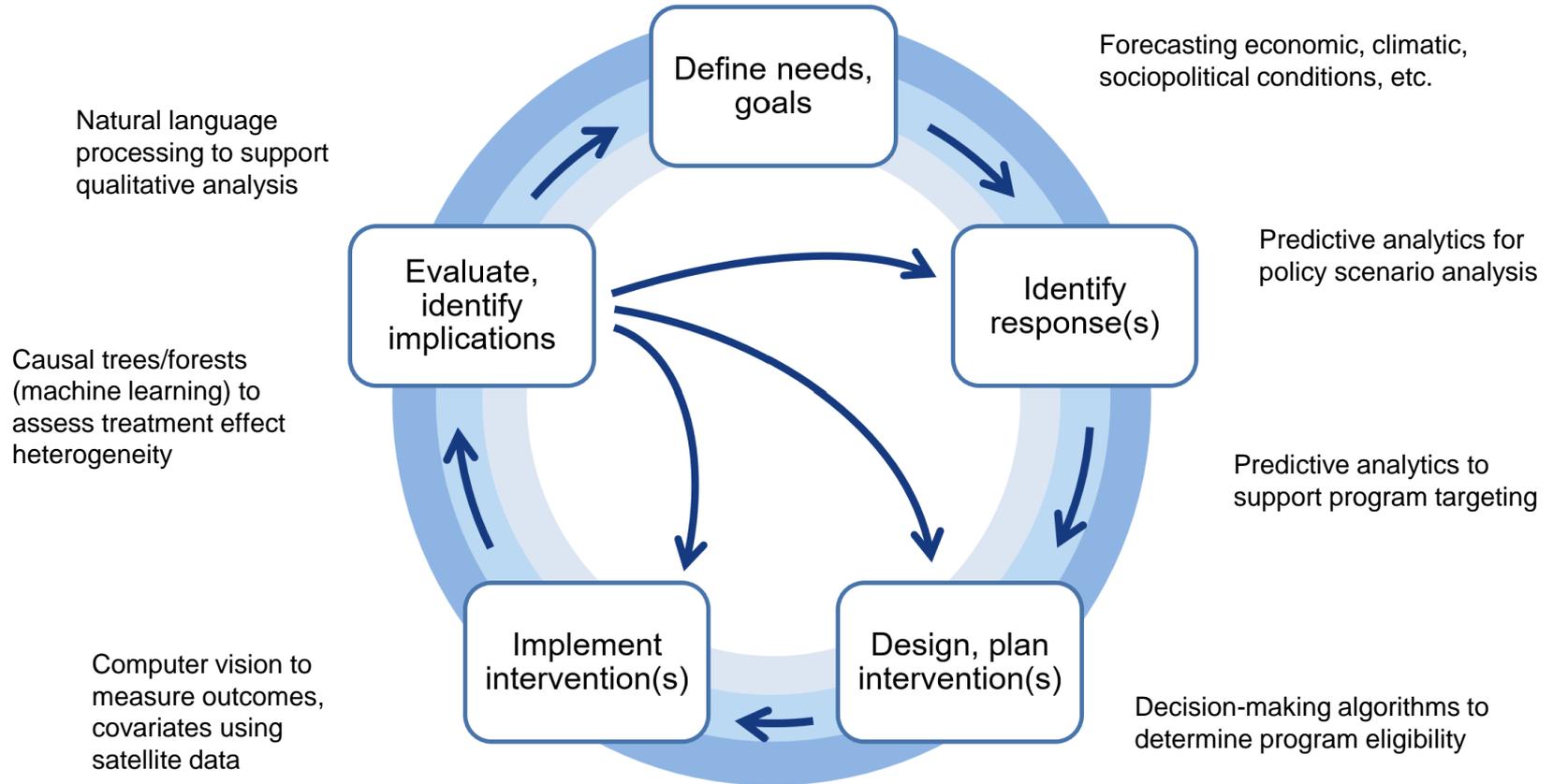
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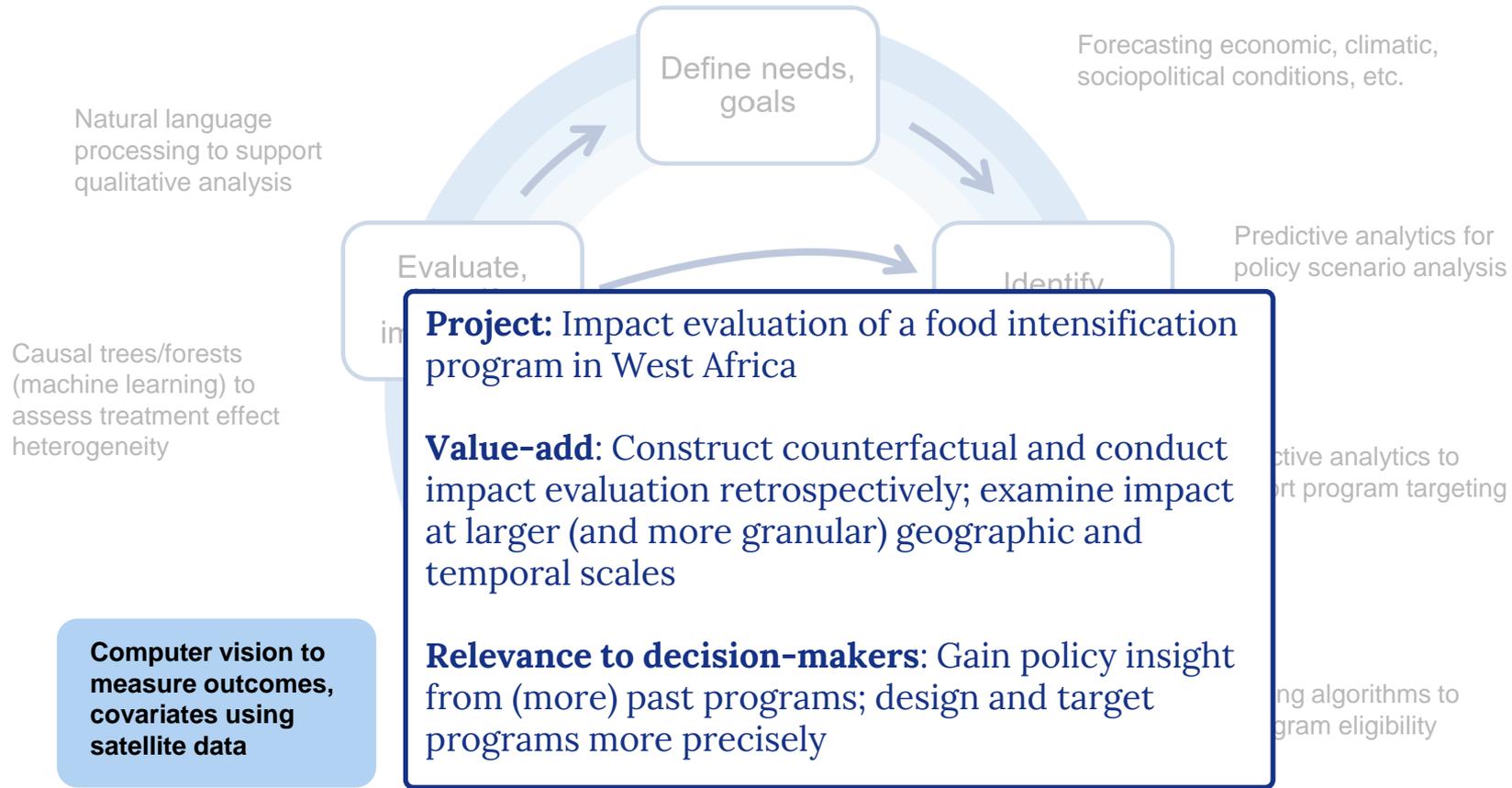
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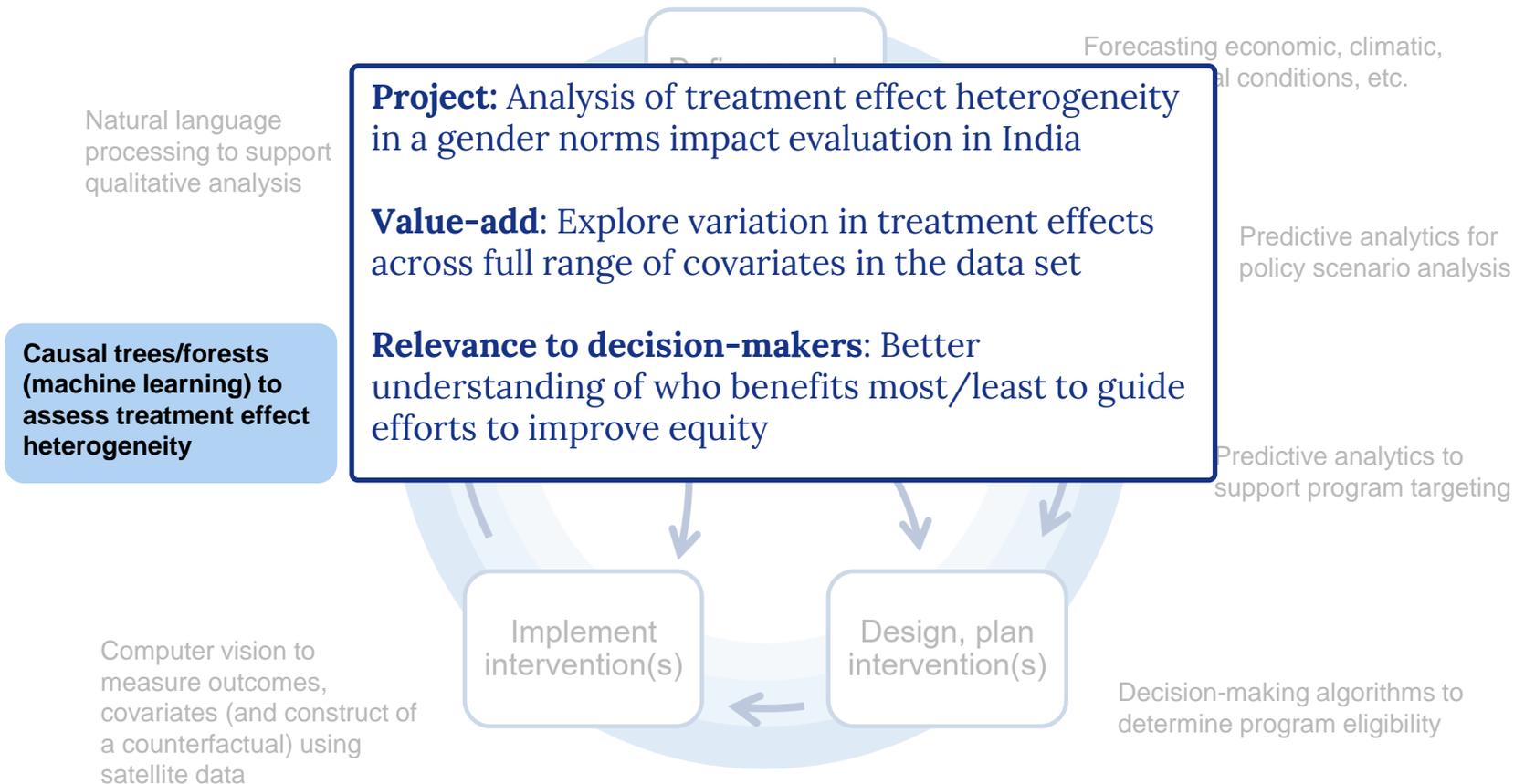
Examples of big data and AI uses across the program cycle



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Promoting the (prudent) use of these methods

Needs and opportunities

- Document specific use cases, conditions for use
- Guidance, training, tutorials, examples
- Establish standards of rigor, transparency, and ethics
- Mitigate limitations with mixed methods designs
- Report practical, real-world interpretation of findings and bias
- Funding and research partnerships to reduce digital divide

Ongoing efforts at 3ie

- Hands-on tutorials with code for remote sensing in IE
- Remote sensing indicator inventory
- Guidance on applications of big data, AI across the program cycle
- Transparent, Reproducible, and Ethical Evidence (TREE) initiative
- Geo4Dev initiative with CEGA and New Light Technologies



Thank you!

Questions? Feedback?