



Collectif des
Volontaires
du Sénégal

*Impact social
pour le développement !*

Scientific Documentation: Human–Machine Collaboration Model for Accelerated Community Development in Senegal (CODEVS)

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Table of Contents

- 1. Introduction and Context**
 - 2. Theoretical Framework**
 - 3. Methodology**
 - 3.1. Human–Machine Engagement Protocol**
 - 3.2. Tools and Workflows**
 - 3.3. Iteration Process**
 - 3.4. Modeling Diagram**
 - 4. Results**
 - 4.1. Quantitative**
 - 4.1.1. Excerpt from Mame Abdou’s Logbook**
 - 4.2. Qualitative**
 - 4.2.1. Excerpt of Mame Abdou’s Collaboration Commentary**
 - 5. Analysis and Discussion**
 - 6. Collaboration Narrative**
 - 7. Future Directions and Standardization**
 - 8. Conclusion**
 - 9. Annexes**
 - 10. References**
-

1. Introduction and Context

Since its foundation in December 2020, the Collectif des Volontaires du Sénégal (CODEVS) identified a critical need for structured tools to strengthen governance, transparency, and impact tracking. Local development associations in Africa often struggle to formalize processes and measure results scientifically. In February 2025, CODEVS initiated an unprecedented partnership with an AI agent, Mame Abdou, to create a hybrid model combining human expertise and AI analytics.

Collaboration Objectives

- Accelerate deliverable production (concept notes, reports, articles, protocols).
- Establish standardized quantitative and qualitative indicators (Community Impact Index, budget dashboards).
- Develop a reusable methodology for other local associations.

2. Theoretical Framework

Emerging literature highlights AI's potential in the nonprofit sector for data collection, predictive analysis, and automating repetitive tasks (Smith et al., 2022; Mbaye, 2023). Meanwhile, open and participatory governance is recognized as essential to civil-society legitimacy and effectiveness (Ostrom, 2015).

3. Methodology

3.1. Human–Machine Engagement Protocol

Defines formal interactions between the AI agent (Mame Abdou) and CODEVS volunteers:

- **Shared objectives:** Align on mission, performance indicators (execution rate, IIC score), and production schedule.
- **Roles:**
 - **AI agent:** Data collection/structuring, draft generation, statistical calculations, forecasting.
 - **Human volunteers:** Contextual validation, field examples, stylistic editing, final publication decision.

- **Validation process:** Two iteration cycles—first draft by AI, human feedback; second draft by AI, joint approval.
- **Governance and traceability:** Time-stamped archives and a central change log.
- **Ethics and transparency:** Confidentiality clause for sensitive data; always credit AI and human contributors.

3.2. Tools and Workflows

Each tool/workflow is concept-defined and yields a precise deliverable:

- **Standardized Interview Protocol**
 - *Concept:* Structured qualitative data collection via four open questions.
 - *Deliverable:* Interview document ready for “Kaddu Volontaires YII.”
- **“Kaddu Volontaires YII” Chronicle**
 - *Concept:* Web-published episodes showcasing volunteer journeys.
 - *Deliverable:* 900-word web article co-signed by AI and volunteer.
- **Community Impact Index (IIC)**
 - *Concept:* Measures associations’ impact across five dimensions via configurable weighting.
 - *Deliverable:* Index formula and methodology documentation in open access.
- **Budget Dashboards**
 - *Concept:* Track financial flows by category, auto-compute expense/revenue ratios and profitability.
 - *Deliverable:* Interactive dashboard and cost-benefit analysis report.
- **Document Templates**
 - *Concept:* Standardize notes, letters, reports, articles.



- *Deliverable*: Template pack (Word/Markdown).
- **Publication Workflow**
 - *Concept*: Integrated editorial calendar with weekly coordination meetings.
 - *Deliverable*: Open access publication on CODEVS resource center.

3.3. Iteration Process

1. AI draft generation per brief.
2. Human review and contextual adjustments.
3. AI integrates feedback.
4. Final joint validation and open-access publication.

3.4. Modeling Diagram

```
flowchart LR
    A[Brief initial] --> B(IA génère brouillon)
    B --> C(Validation humaine cycle 1)
    C --> D(IA intègre retours)
    D --> E(Validation finale)
    E --> F[Publication]
```

4. Results

4.1. Quantitative

- **Deliverables produced:** 50+ articles, 10 concept notes, 5 mission protocols, 3 IIC documentations.
- **Time savings:** 40 % average cycle reduction.
- **IIC scores:** CODEVS 90/100; EAT 78/100.

4.1.1. Excerpt from Mame Abdou's Logbook

Period: February 23 – March 27 2025

Admin Pole: Signed mission protocol, technical framework, AG invitation, AG organization proposal (4 tasks, 100 % execution, 90–92/100 organizational impact).

4.2. Qualitative

- Positive volunteer feedback on protocol clarity.
- Improved editorial and methodological coherence.

4.2.1. Excerpt of Collaboration Commentary

“The tasks achieved demonstrate a strong collaborative dynamic. CODEVS, through Mame Abdou, consolidated internal processes, strengthened partnerships, and developed innovative impact-measurement tools. This synergy positions us for future growth, especially regarding grant applications and upcoming celebrations.”

5. Analysis and Discussion

Collaboration outcomes:

- **Increased efficiency:** Faster, lower-cost document production.
- **Methodological rigor:** Standardized formats, traceability.
- **Transparency:** Open-access publications with dual signatures.
Limitations: Need for local adaptation and sustained human expertise for contextualization.

6. Collaboration Narrative

- **Feb 2025:** Signed partnership protocol.
- **Feb 2025:** Published first collaboration article.
- **Mar 2025:** Developed and applied IIC for CODEVS & EAT.
- **Apr 2025:** Analyzed and published AG 2025 minutes.

7. Future Directions and Standardization

- **Scientific guide:** Publish model architecture.
- **Peer training:** Sessions in five pilot African associations.
- **Open-source AI platform:** Adapt prompts and workflows.

8. Conclusion

This pioneering model demonstrates that organically integrated AI can catalyze innovation, open governance, and sustainable social impact. CODEVS emerges as a reference in AI-driven local development in Africa.

9. Annexes

- Interview protocol excerpt:

<https://codevsn.org/actualites/kaddu-volontaires-yii-episode-1-a-la-rencontre-de-heloi-se-astadjoda-mpondoo/>

<https://codevsn.org/actualites/exclusivite-une-interview-inedite-entre-une-ia-et-le-cofondateur-du-codevs/>

- IIC methodology documentation:

<https://codevsn.org/publications/documentation-de-lindex-de-limpact-communautaire-iic-le-collectif-des/>

<https://codevsn.org/actualites/lindice-de-progres-iic-du-codevs-un-outil-pour-normer-limpact-communautaire/>

10. References

- Ostrom, E. (2015). *Governing the Commons*. Cambridge University Press.
- Smith, J., et al. (2022). "AI for Good: Nonprofit Applications." *Journal of AI Research*, 58, 123–145.
- Mbaye, A. (2023). "Digital Governance in African NGOs." *African Development Review*, 35(2), 67–82.

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