

# Stakeholder mapping and requirements identification for improving traceability in halal food supply chain

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## BACKGROUND

- Industrial 4.0 technologies (e.g., internet of things, Blockchain) used for building traceability system within food supply chain [1]
- However, an adoptable traceability system requires prior knowledge of stakeholders' needs [2]
- Most of the work related to design-level issues in the traceability system [3][4]
- Lack of attention to stakeholders' needs while designing traceability system decreased adoption of traceability system
- In the halal food industry [5]
- Research work about mapping stakeholders' needs/requirements for building traceability system is scarce [6]
- Hence, this research work intends to gain understanding of the stakeholders' needs in Kuwaiti halal food industry
- This will help building an effective and adoptable traceability system a tailored to stakeholders; needs
- Key stakeholders in halal food industry such as firms, suppliers, retailer (see Figure 1).



Figure 1: Stakeholders in halal food industry controlling halal food supply chain

## AIM

To conduct a stakeholders' mapping analysis in Kuwaiti halal industry for building adoptable traceability System tailored to stakeholders' needs

## METHODOLOGY

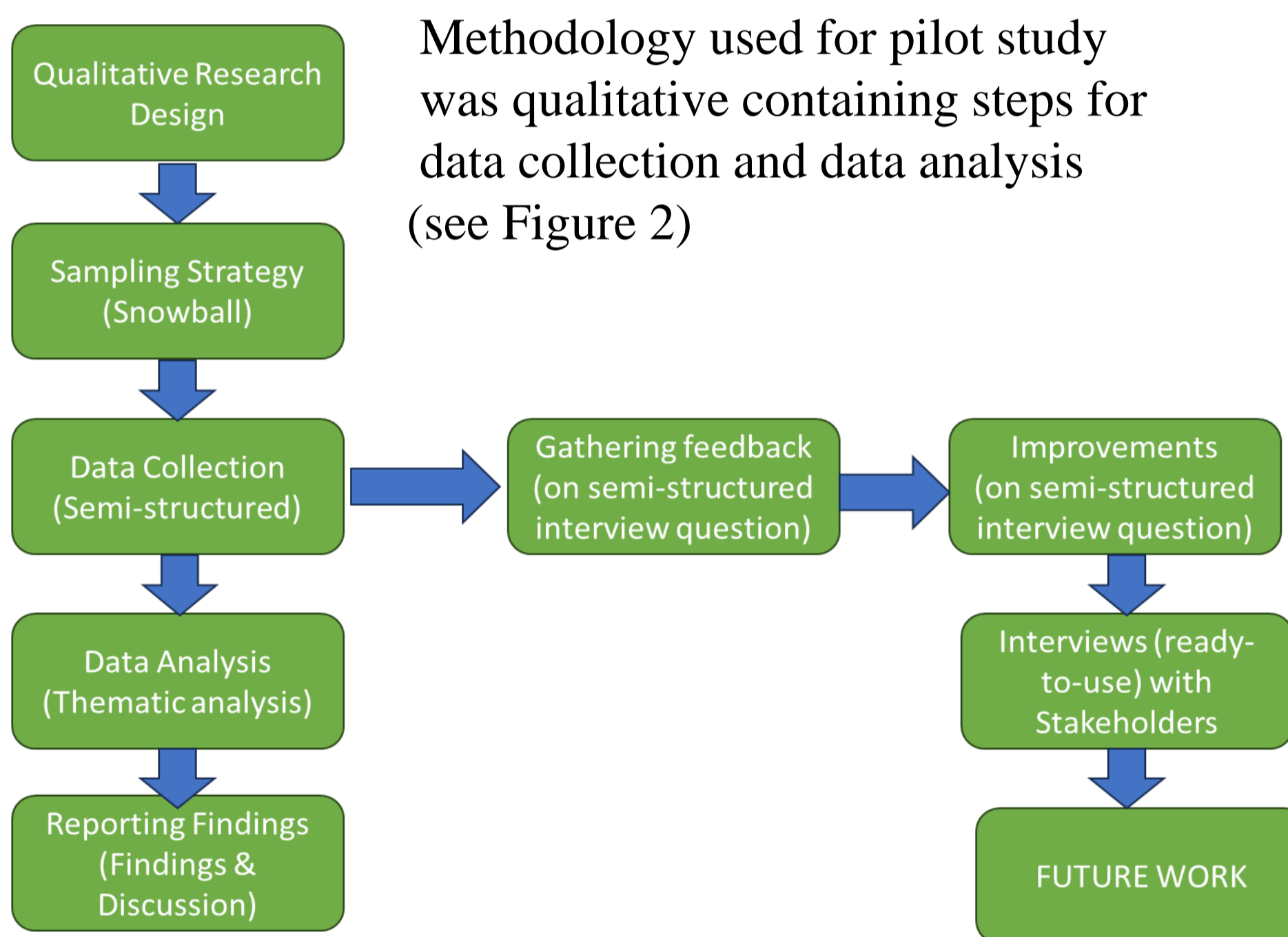


Figure 2: Key steps in methodological plan for pilot study

Thematic analysis help find codes and themes from data (see Fig. 3)

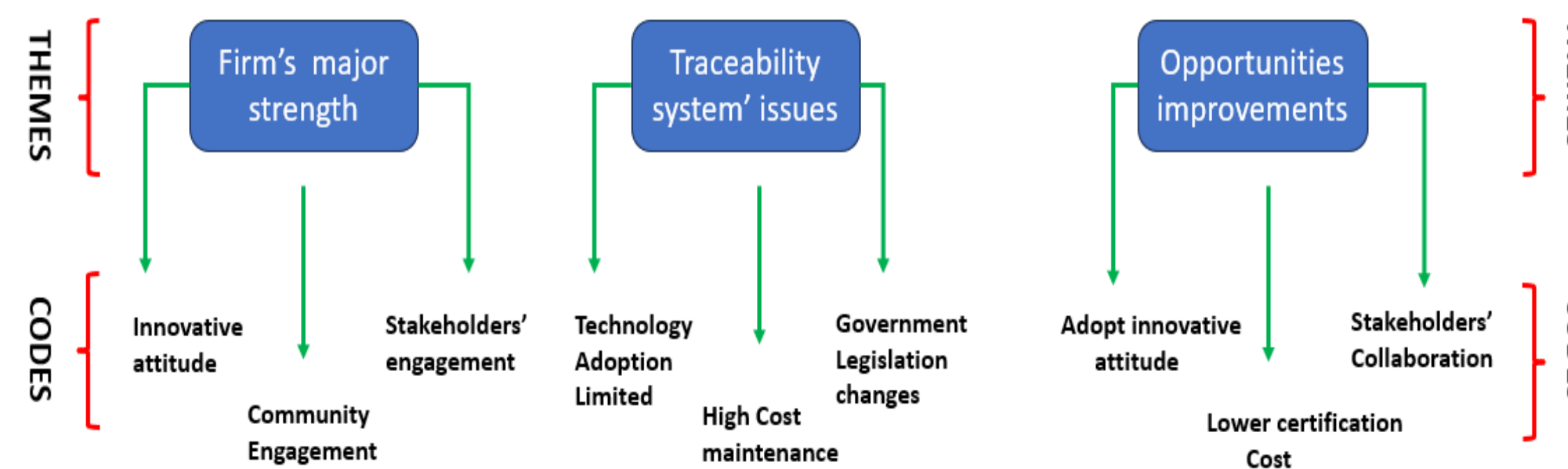


Figure 3: Example of building codes and themes from data

## FINDINGS

Stakeholders identified issues and opportunities build traceability system tailored to needs (see Fig. 4)



Figure 4: Summary of key findings from qualitative data

## CONCLUSION

- The key stakeholders identified: gov., supplier, firms
- The stakeholders needs: technology-based solution,
- Cost-effective, government approved solution,
- Cooperation & communication among stakeholders
- Potential traceability tailored to above needs may increase adoption & implement
- The future study involve modelling traceability system tailored to stakeholders' needs using Technologies 4.0 for Kuwaiti halal food industry

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