Sociotechnical requirements engineering for data science systems

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Sociotechnical data science: Conceptual model

- Organisation
- Social collaboration
- Local interaction
- Analytics
- Data

1   Introduction

- Data scientists struggle to manage **expectations**, sustain **user adoption**, and navigate **resource constraints**

- These issues are fundamentally **sociotechnical**: they emerge as technical systems become embedded in social behaviour

2   The "social" turn

- **Integrate social analysis** methods into requirements engineering

- **Engage with stakeholders** during design

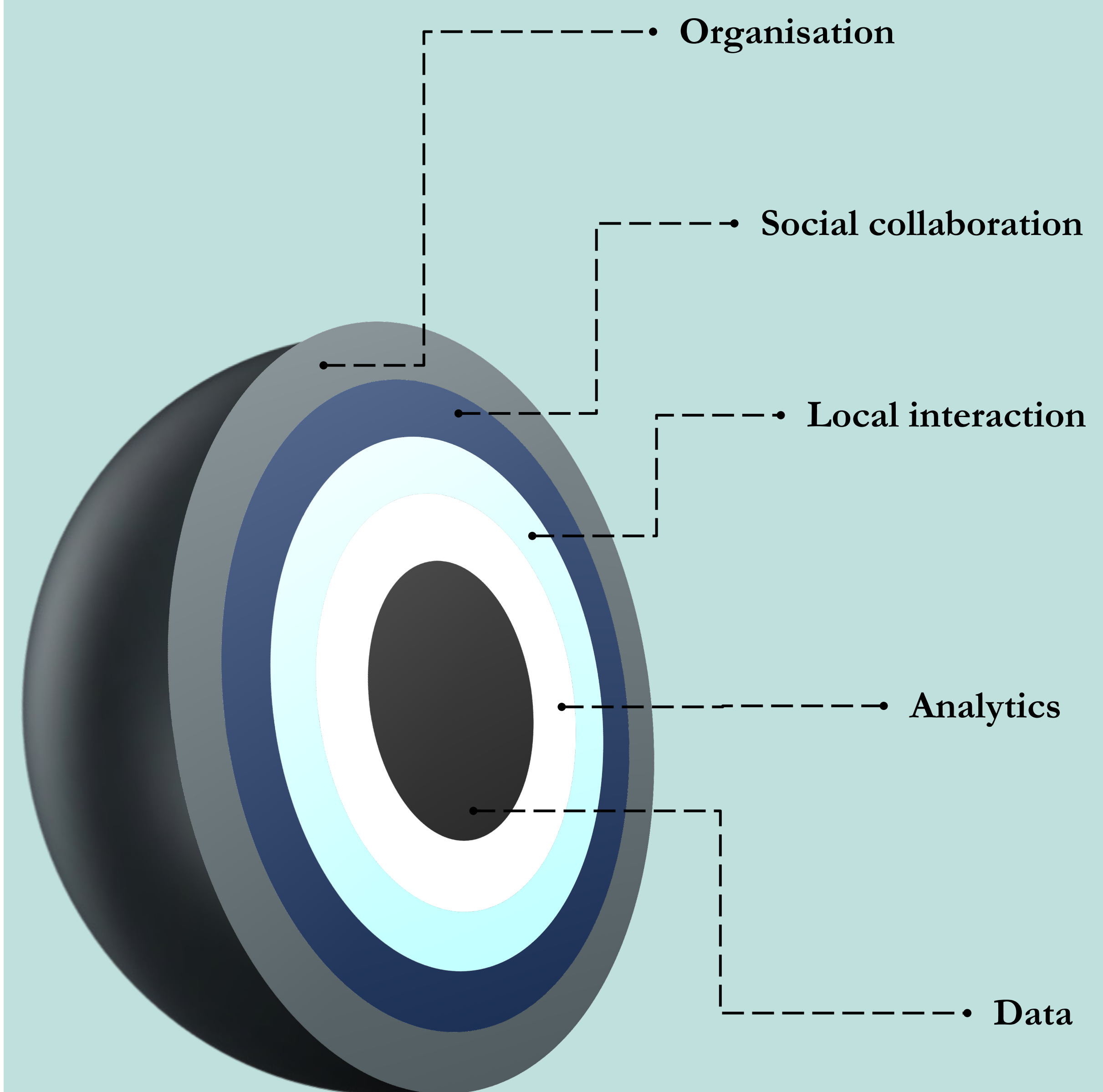- Build from the **perspectives** of stakeholders

3   Questions

- What **local sociotechnical practices** exist in industry?

- How can past sociotechnical requirements engineering approaches **complement** local practices?

- How can sociotechnical requirements engineering for data science be **applied in practice**?

4   Research programme

- **Conceptual investigation**   • Elaborate conceptual model and process guidance

- **Field study and survey**   • Explore local sociotechnical practices

- **Field experiment**   • Formatively assess approach

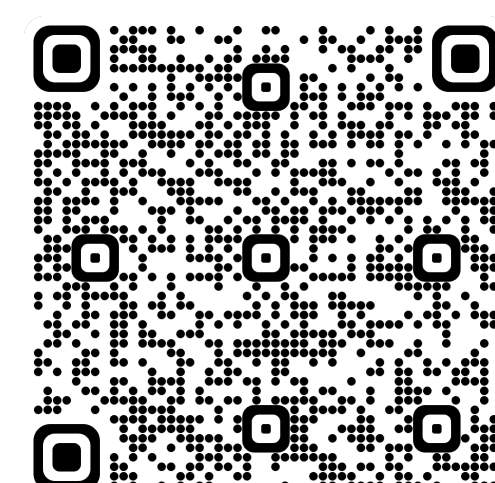- **Case study**   • Apply approach on live project

Key references

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