TDS Project 2:
Exploring a Metric Visualization Framework for Measuring Customer Trust Satisfaction in The Trustworthy Digital Society: A Transnational Research

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Background

This project aims to understand current research and explore an effective metric visualization model for measuring customer trust satisfaction in a trustworthy digital society. The research outcomes will explore new fundamental research on data processing visualization on metrics of business models, provide new insights for changing policy with various views on a trustworthy digital society, and enhance Australian commercial 3 products with a better understanding of customer trust in digital marketing.

Additionally, to support visualization models, the UNSW team will develop efficient and reliable generation of software and models through LLM-empowered code generation and refactoring, enabling seamless transitions between programming languages to improve maintainability, ensuring consistency in multi-language projects.

Key Updates

Transforming Qualitative Models into Quantitative Forms For Measuring Success in the Digital Transformation Age

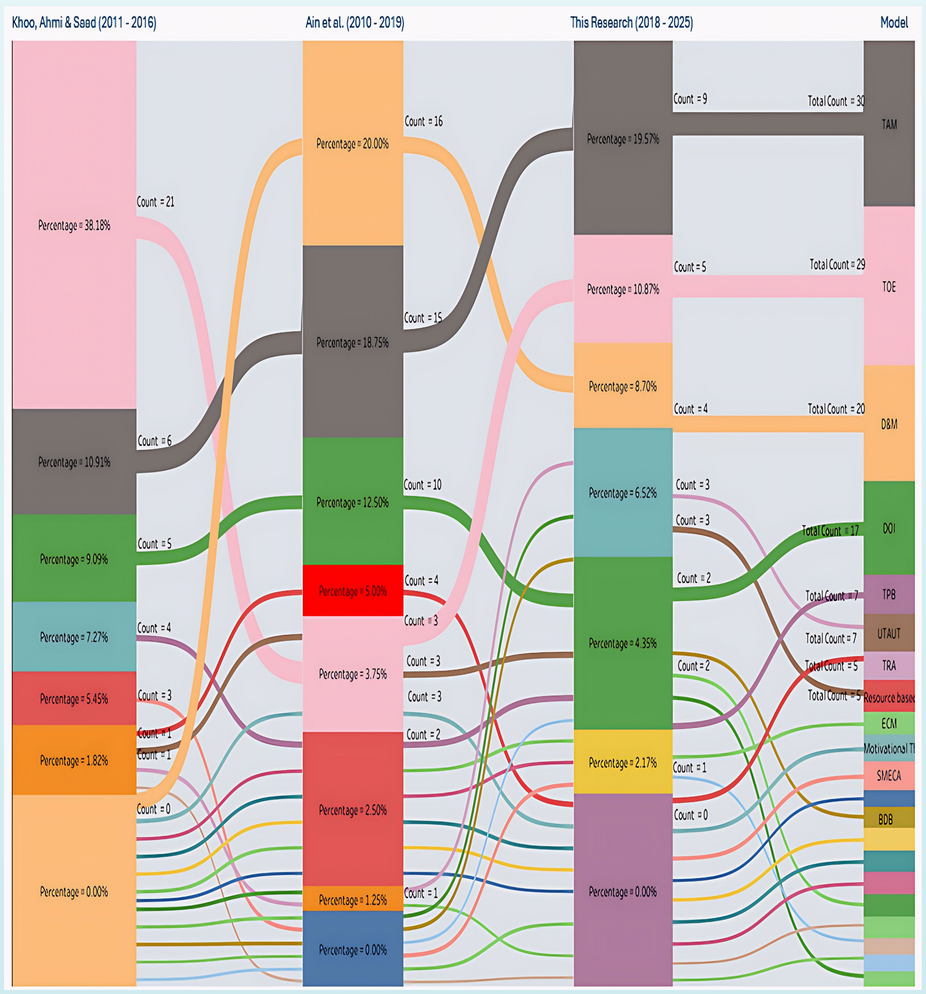

Figure 1: A Comparative Analysis of Reviews on IS Research Models
(Source: Sage Open 2025, accepted after revision)

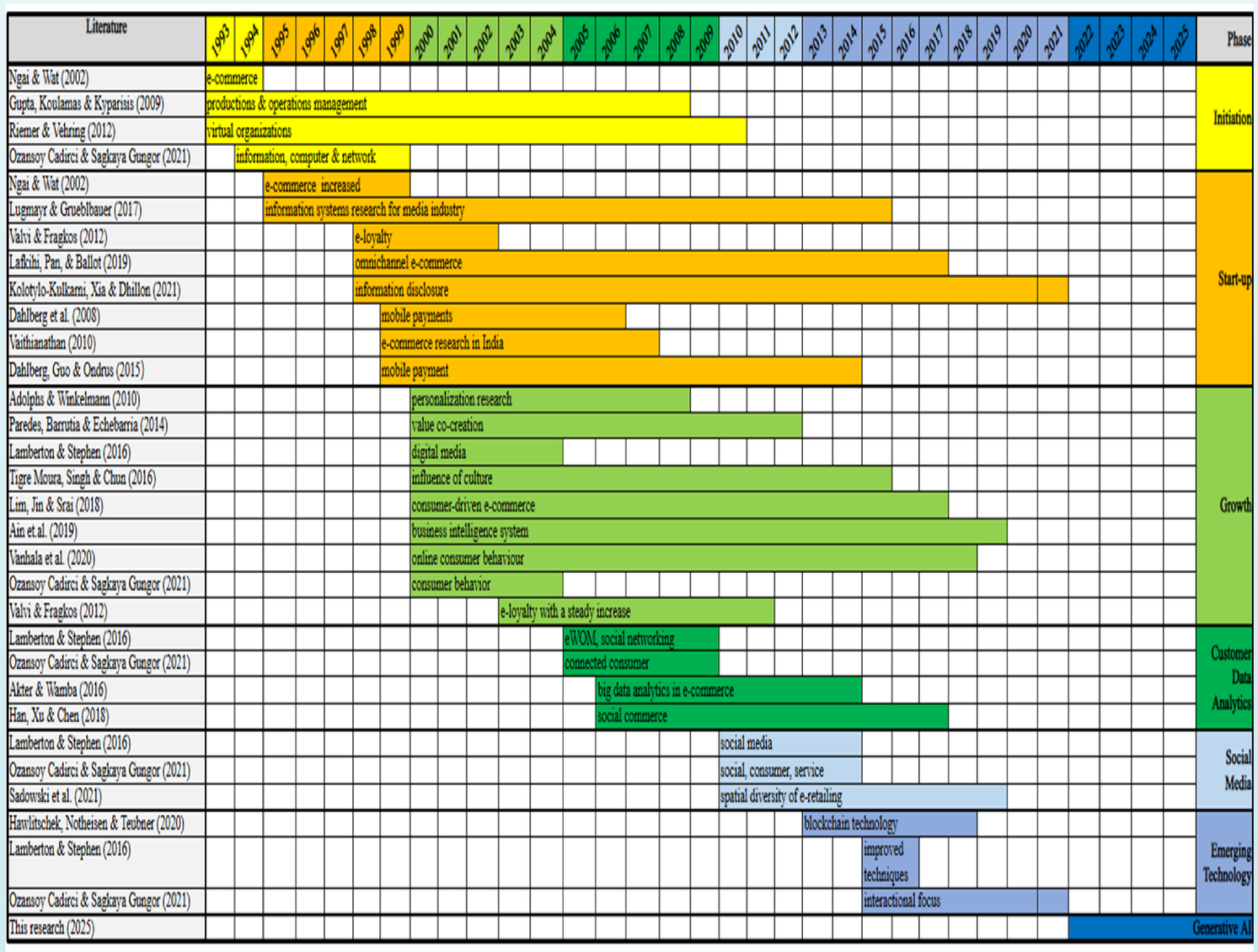

Figure 2: Reviews on The History of E-commerce Research (source: Sage Open 2025, accepted after revision)

(A) Transparency & Explainability Visualization (TEV)

Goal:	Reduce information asymmetry and make processes auditable.
Methods:	Model cards, privacy dashboards.
Advantage:	Enhances transparency and accountability.
Limitation:	Risk of "transparency theatre"; can overwhelm non-experts.
Blind Spot:	Trust often measured only via self-reports.

(B) Risk & Uncertainty Visualization (RUV)

Goal:	Communicate uncertainty and reliability for better decisions.
Methods:	Uncertainty maps, probabilistic plots.
Advantage:	Builds calibrated trust and decision awareness.
Limitation:	Users may misread probabilities; too much uncertainty reduces confidence.
Blind Spot:	Weak link between uncertainty perception and trust metrics.

(C) Aesthetic & Emotional Visualization (AEV)

Goal:	Use aesthetics and emotion to increase engagement and credibility.
Methods:	Storytelling visuals, affective design.
Advantage:	Improves attention and emotional connection
Limitation:	Aesthetics may overshadow data accuracy.
Blind Spot:	Trust inferred from emotions, not behavior.

(D) Interactive & Participatory Visualization (IPV)

Goal:	Foster shared understanding through co-creation and interaction.
Methods:	Collaborative dashboards, annotation systems.
Advantage:	Encourages transparency and user empowerment.
Limitation:	High design complexity; user overload risk.
Blind Spot:	Lack of quantitative measures for participatory trust.

Figure 3: Four Research Trends in Trust Visualization (source: LESCDT 2025,submited)

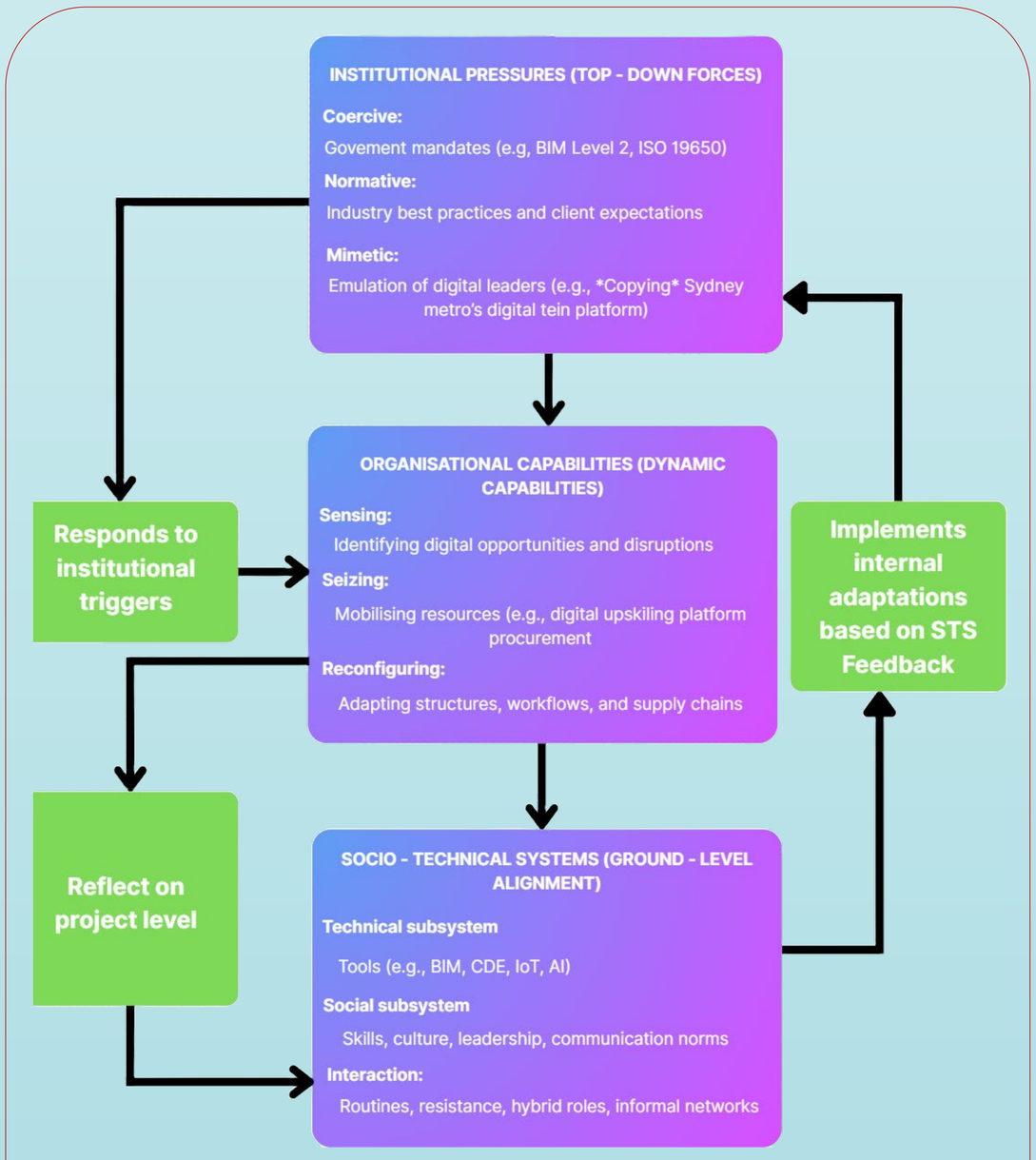

Figure 4: A Multi-Level of Digital Transformation Focus in The Trustworthy Digital Society
(source: IEEE Engineering Informatics 2025, accepted)