

THE INFORMATION SYSTEMS DECISION

Choosing systems that improve operational efficiency, customer experience and decision quality.

THE CONSULTING TASK

What should a growing business modernise first?



Information becomes value through processes and people.

Business information systems capture, connect and analyse data to support action.

FOUR COMPLEMENTARY LAYERS

TPS Records daily sales, payments and transactions.

ERP Coordinates stock, purchasing and finance.

CRM Connects customer interactions and service.

DSS / BI Turns records into dashboards and decisions.

HOW TO JUDGE SUCCESS

DeLone–McLean model applied to an IS

SYSTEM QUALITY reliability + usability

INFORMATION QUALITY accurate + timely data

SERVICE QUALITY support + responsiveness

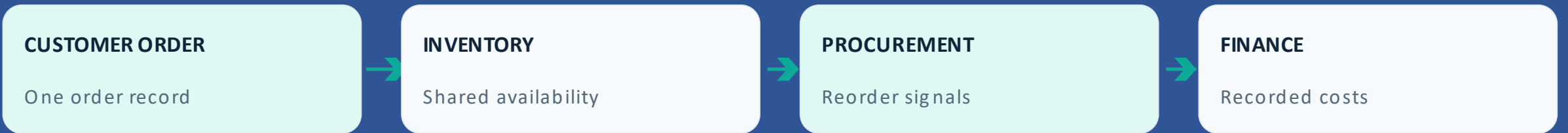
Use + satisfaction → realised net benefits

Critical point: a working system is not necessarily an adopted or valuable system.

Theory applied to IS success and differing quality effects: (Lutfi, 2023).

ERP improves coordination—but demands organisational change.

Enterprise Resource Planning integrates core business processes and shared records.



OPERATING BENEFITS

Single data source improves stock visibility, process consistency and coordination across departments.

IMPLEMENTATION COSTS

Process redesign, legacy-data cleaning, training and disruption create costs beyond the licence.

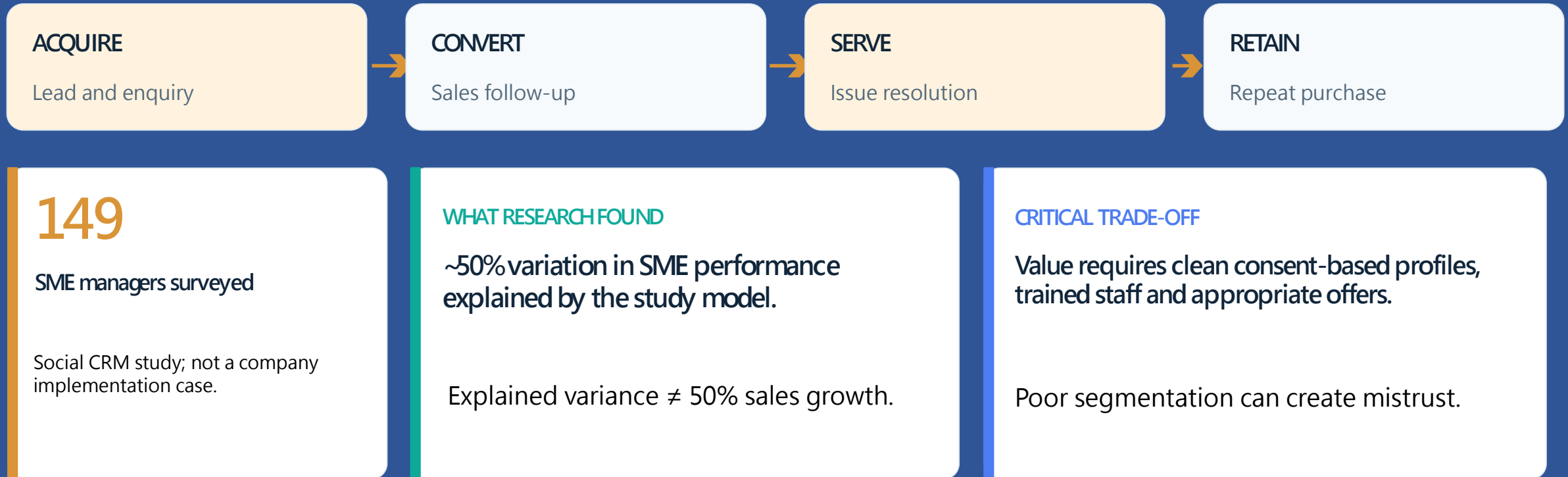
WHEN IT IS SUITABLE

Prioritise ERP when inventory errors, duplicated records or order-to-cash delays drive losses.

Critical judgement | Integration benefits depend on organisational fit and business-process redesign.

CRM can build retention—but data alone cannot build trust.

Customer Relationship Management unifies sales, service and customer interaction history.



Best fit: a growing business losing repeat customers or struggling to provide consistent service.

Fit, viability and performance associations in SME social CRM: (Mohammed et al., 2024).

Analytics supports decisions; it does not replace judgement.

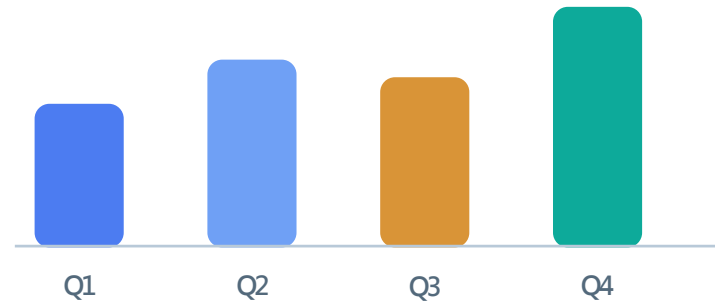
Business intelligence reports performance; decision support tests options under uncertainty.

DATA INPUTS

- Sales and service records
- Inventory and costs
- Staff capacity and lead times
- External demand signals

ANALYSE + MODEL

Illustrative quarterly demand index



Sample data only — not empirical findings

MANAGEMENT ACTION

- Forecast demand
- Test stock scenarios
- Compare staffing choices
- Prioritise scarce resources

Critical limit: bad input data or unrealistic model assumptions can make precise-looking advice wrong.

Empirical SME evidence on BI, organisational learning and innovation: (Anjaningrum, Azizah and Suryadi, 2024).

Which system comes first depends on the business problem.

Compare business value, costs, implementation demands and risk—not fashionable features.

CRITERION	ERP	CRM	DSS / BI
Decision need	Run integrated operations	Serve / retain customers	Forecast / compare choices
Primary gain	Consistency + visibility	Relationships + response	Insight + prioritisation
Main investment	Migration + process redesign	Data quality + staff adoption	Data integration + expertise
Main risk	Disruption / scope creep	Privacy / poor segmentation	Bias / false precision
First when ...	Order and stock errors dominate	Customer leakage dominates	Good data; weak insight
Success measures	Cycle time; stock accuracy	Retention; service speed	Forecast error; decision time

TOE check: Technology fit + Organisational readiness + External environment → justified adoption.

TOE and information-system integration applied in a different sector: (Mohamed et al., 2023).

Walmart: visible gains at scale—limited transferability.

Its reported automation progress illustrates integrated operational information flows.

> 60%

US stores receive some freight from automated DCs.

Q3 FY26 reported operating position.

> 50%

E-commerce fulfilment-centre volume automated.

A measure of automation scale, not ERP ROI.

27%

Global e-commerce growth in Q3 FY26.

Multiple drivers; cannot assign growth solely to automation.

HOW THE SYSTEM HELPS

Coordinated inventory, fulfilment data and automation can improve throughput and unit productivity.

WHY WE MUST QUALIFY THE CLAIM

Walmart reports outcomes itself; its scale, capital and logistics are unlike most growing SMEs.

Consultancy lesson: test the process benefit locally; do not promise Walmart-level automation economics.

Source of all reported company indicators: (Walmart Inc, 2025).

Target: customer data enables reach, but not proven ROI.

Loyalty, personalised offers and connected shopping provide CRM-related evidence.

13M+

New Target Circle members in 2024.

Observed memberships reported in March 2025.

WHAT TARGET IS BUILDING

- Connected online, in-store and social experiences.
- Personalised search, offers and loyalty engagement.
- Faster fulfilment and a modernised inventory system.

CLAIM WE CAN SUPPORT

13M+ joined in 2024, showing large programme reach—not incremental profit.

CAUTION + ETHICS

A >\$15bn sales-growth ambition for 2030 is a target. Profiling requires transparency and choice.

Best transferable practice: assess retention, repeat purchases and complaints—not just loyalty enrolments.

Company strategy, 2024 member additions and forward-looking target: (Target Corporation, 2025).

Business value can disappear when governance fails.

Risk controls must address technology, managerial power and automated judgement.

01

PRIVACY + CYBERSECURITY

(Diro et al., 2025)

Data leakage, access misuse and sensitive inputs to GenAI.

Encrypt; restrict access; audit retention; prepare incident response.

02

EMPLOYEE MONITORING

(Kayaş, Ong and Belal, 2025)

Intrusive productivity scoring can weaken trust and autonomy.

Explain purpose; minimise collection; consult staff; appeal decisions.

03

AI BIAS + OPACITY

(Papagiannidis, Mikalef and Conboy, 2025)

Biased recommendations can unfairly affect customers or staff.

Test fairness; document models; keep human review and accountability.

Responsible use means clear ownership, transparent monitoring, ongoing tests and a genuine right to review.

Adopt the smallest system that solves the largest problem.

Suggested decision pathway for a growing business; all timings are illustrative.

MONTHS 0–2

DIAGNOSE

Map processes; identify data owners; baseline order, customer and forecast performance.

MONTHS 3–6

PILOT FIRST SYSTEM

If operations fail: modular ERP. If retention fails: CRM. Train staff; test privacy.

MONTHS 7–12

INTEGRATE + SCALE

Clean shared records; add BI/DSS views; compare results and stop poor-value features.

PROPOSED PILOT KPI GATES

Order cycle • Inventory accuracy • Repeat purchase • Forecast error • User adoption • Data incidents

Decision rule: scale only after user adoption, data quality and measurable net benefits are demonstrated.

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