

# Beyond Bottlenecks: How SME Digital Twins Secure Transformation Success

## Executive summary

Business transformation programmes are often delayed because key Subject Matter Experts (SMEs) are not available. This creates bottlenecks, delays project outcomes and increases the risk of the transformation achieving its goals.

Insight Consulting has recently been exploring the use of AI virtual agents to solve this problem.

The virtual agents act as digital twins of business SMEs. They absorb the domain expertise that is locked away in the SME, and provide it to the transformation teams to accelerate requirements gathering, decision validation, and scenario planning. This approach speeds up transformation, preserves organisational knowledge, and reduces dependency on individual people.

## Business problem

Transformation initiatives depend on Subject Matter Experts (SMEs) who provide the deep contextual knowledge and validation required for successful change. These SMEs often come from line-of-business (LOB) roles such as operations, sales, or finance. They can also be found in back-office functions such as HR, IT, or compliance.

LOB and functional SMEs usually have operational responsibilities and need to prioritise urgent reactive demands from the business. This limits the time they can make available to the transformation programme. Even though everyone agrees their expertise is essential for the transformation, the transformation team often find themselves waiting for SMEs to provide direction.

The result is a slowing-down of transformation tasks such as requirements gathering, decision validation, and scenario planning. Often the transformation programme is forced to must extend timelines, which can then increase costs and the risk of the transformation.

This reliance on a small group of SMEs is an organisational weakness. If key people leave, or documentation is out of date, the capabilities of the whole organisation are reduced.

## The solution

The solution is to deploy AI-powered virtual agents that act as scalable, always available SMEs.

The AI Virtual Agents act as Digital Twins of the Subject Matter experts. They harvest organisational documentation, creating a model of an SME's knowledge, personality, communication styles, and decision heuristics. Natural Language Processing and knowledge graphs build a comprehensive, context-aware knowledge base.

Once trained, the AI agents can be deployed as chatbots or knowledge portals, and can be built into workflow integrations and process automation. Decision-maker expertise is now available to the transformation team 24/7.

The AI agents should be continuously updated and refined with feedback and as new information becomes available, to ensure they remain relevant and up to date.

## Real world example

### Background

A classic example of the challenge was seen on a global IT transformation at a large European financial services group.

The objective was to deploy new infrastructure and applications across various business units and geographical regions.

### Challenges

The transformation team faced two major challenges:

- 1. Complex Stakeholder Landscape.** With more than 50,000 employees, there were numerous stakeholders, business unit managers, application owners, and technical teams involved. These groups had diverse requirements, expectations, and priorities, creating alignment challenges. The stakeholders were globally distributed, often working in different time zones to each other and the transformation team. This made it difficult to get all the stakeholders around the table.
- 2. Continuous Rework and Scope Changes.** There were frequent updates to both high-level and low-level designs, along with migration and deployment plans. Constant changes meant plans and project documents were being constantly re-created, often requiring contract re-negotiations with consultancies and outsourcers supporting the transformation.

### Programme Deliver was damaged in three ways:

- Project timelines were extended due to ongoing rework.
- Additional costs arose from scope changes and the need to realign contracts with service providers.
- Project teams were placed under increasing stress as they worked under tight deadlines.

## How AI Virtual Agents Would Have Helped

### Quick Easy Access to SMEs

**24/7 Availability:** AI virtual agents would have provided round-the-clock access to business and technical expertise, eliminating delays caused by limited human SME availability.

**Global Coverage:** Agents could have simultaneously support all business units, geographies, and stakeholder groups, ensuring consistent guidance and reducing turnaround times.

### Streamlined Requirements and Design Processes

**Automated Requirements Gathering:** AI agents could have analyse project documentation, stakeholder communications, and historical data to efficiently extract and validate requirements.

**Accelerated Design Feedback:** AI agents would have reviewed high-level and low-level designs for compliance with business rules, regulations, and operational constraints, reducing the need for repeated revisions.

### Reduced Rework and Scope Creep

**Proactive Scope Management:** The AI agents would have monitored project documentation and communications. When they detected potential scope changes, they could have alerted programme management so that issues can be managed before they escalate.

**Predictive Analytics:** Leveraging historical project data, AI could have forecast potential risks, identifies likely sources of rework, and recommends preventive actions—minimising redesigns and schedule disruptions.

### Improved Stakeholder Management

**Stakeholder Analysis:** AI agents could have analysed stakeholder sentiment, anticipate reactions, and identify conflicts in real time, enabling proactive and effective stakeholder management.

**Personalised Communication:** AI could have customised messages and updates for different stakeholder groups, increasing engagement and reducing misunderstandings.

## How To Use SME Digital Twins

AI virtual agents can be put to work supporting four types of transformation programme task:

- **Requirements gathering:** Decision validation, impact analysis, training, and “war gaming” transformation scenarios.
- **Decision Validation:** Virtual SME agents act as an on-demand validation resource, checking proposed changes against business rules, compliance frameworks, and operational constraints.
- **Impact Analysis:** The agents can simulate the effects of proposed changes across various business functions and processes.
- **War Gaming Transformation Scenarios:** Virtual SME agents enable teams to “war game” different transformation approaches by simulating scenarios, predicting outcomes, and testing theories about business impact and stakeholder reactions.

## Building The Case For SME Digital Twins

### Return On Investment

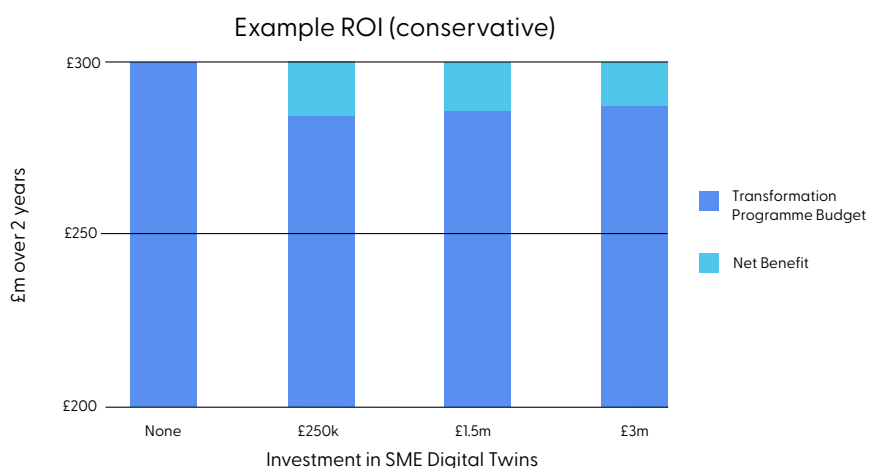
The Return On Investment for an SME Digital Twin will come from four benefits:

1. **Cost Reduction:** Virtual agents reduce operational expenses by automating repetitive queries, consuming less time from expensive experts, and minimizing the need for additional people to stand in for SMEs.
2. **Ability To Scale Up Transformation:** Support multiple teams and initiatives simultaneously by eliminating scheduling conflicts and bottlenecks.
3. **Faster Project Delivery:** Accelerate decision-making and project timelines by providing instant, consistent SME-level responses.
4. **Better Transformation:** Enhanced user experience and higher satisfaction rates due to faster response times and consistent guidance.

### ROI Example

Insight Consulting has modelled the impact of SME Digital Twins on a £300 million transformation programme planned over two years.

*The chart shows the net benefit, after investing in AI, at four different levels of investment in SME Digital Twins. We used conservative estimates of the cost savings achievable. More aggressive estimates suggest a £3m investment could achieve a £27m reduction in the transformation programme budget.*



## Partnering For Successful Implementation

Insight Consulting's track record in AI projects has shown that a successful implementation must overcome several hurdles. Insight Consulting can guide and support its clients through challenges such as:

- **Knowledge gaps:** Undocumented or tacit SME knowledge may be missed.
- **Integration complexity:** Legacy systems, data silos, and workflow incompatibility.
- **AI limitations:** Difficulty with complex, novel, or nuanced scenarios.
- **Resistance to change:** Stakeholder scepticism and preference for human experts.
- **Competing priorities:** Operational “firefighting” and resource constraints.

- **Accountability:** Unclear responsibility for AI-driven recommendations.
- **Compliance & auditability:** Challenges in regulated industries.
- **Data privacy & security:** Sensitive information access and regulatory risks.
- **Lack of AI/IT expertise:** Insufficient internal knowledge and reliance on vendors.
- **Insufficient training:** Employees unprepared to use AI agents effectively.
- **Perceived high costs:** Concerns about development and deployment investment.
- **Unclear value proposition:** Difficulty quantifying ROI and tangible benefits.

## Conclusion

AI virtual agents as digital twins for business SMEs directly address the widespread SME bottleneck in transformation programmes. It enables organizations to accelerate change, preserve knowledge, and reduce risk.

While challenges remain—such as knowledge gaps, trust, and integration—continuous learning, robust governance, and human oversight ensure reliability and adoption.

As AI capabilities advance, virtual SME agents will become increasingly sophisticated, offering proactive guidance and deeper integration with business processes. Embracing this approach positions organizations to achieve faster, more resilient, and more successful transformation outcomes, delivering measurable ROI and competitive advantage.

Insight Consulting offers prototypes, knowledge and experience to guide their clients to a successful implementation of SME Digital Twins.