Future-Proofing Organisations with AI

Foreword

The Role of Artificial Intelligence in Modernising Service Delivery

Artificial intelligence (AI) has the potential to transform how organisations design and deliver services. This article explores the practical applications of AI in enhancing operational efficiency, improving service delivery, and supporting strategic objectives in areas such as administration, organisational management, and decision-making. As a case study, we examine the modernisation of the building permit process in the city of Mäntykylä, an imaginary Finnish city navigating the digital transformation of its building permit process. The example illustrates AI's role not just as a technological enabler but as a key driver of service improvement and organisational development—helping to simplify bureaucracy, reduce processing times, and improve the overall experience for citizens.

This article is based on the **Business Technology Standard (BTS)**, a best-practice framework for integrating business and technology across organisations. BTS provides a structured yet flexible approach that supports strategic planning, resource management, and agile methodologies. By following this framework, AI initiatives can be aligned with business objectives, regulatory requirements, and user needs, ensuring they contribute effectively to organisational development and value creation.

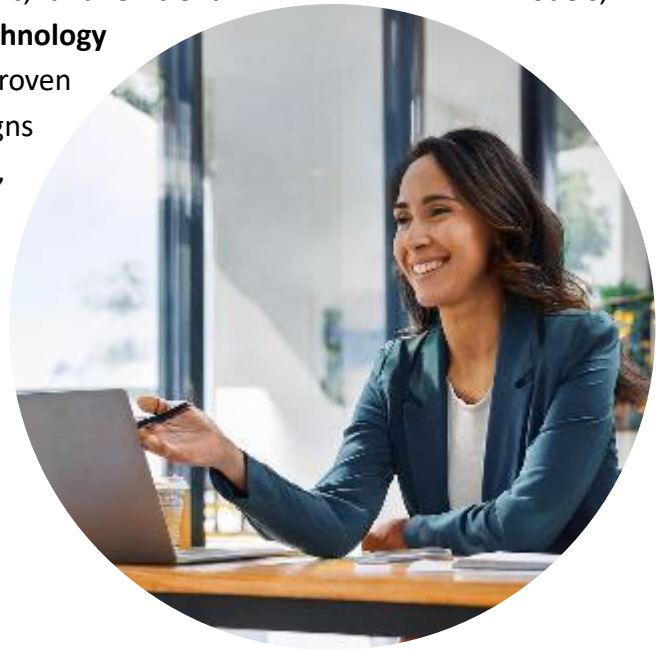
We will explore the different stages of this AI-enabled transformation, from identifying strategic priorities to designing, implementing, and embedding new digital solutions. Each phase will highlight both the opportunities AI presents and the practical challenges that must be addressed, such as data quality, user engagement, ethical considerations, and change management.

To illustrate the impact of AI in practice, we follow the story of Valtteri Vihtanen, a Finnish resident embarking on a deeply traditional yet modern journey: planning to build a backyard sauna. In Finland, the sauna is not just a leisure facility—it is a cultural institution, a place of relaxation, social connection, and even business discussions. With over three million saunas in a country of just 5.5 million people, obtaining a permit for a new sauna is a common bureaucratic process that AI has the potential to streamline.

Valtteri's journey through the permitting process demonstrates how AI can support citizens, simplify administrative workflows, and foster

greater collaboration between different departments. His experience is a reflection of how technology can help create smarter, more user-friendly services that respect both efficiency and tradition.

By the end of this article, readers will gain insights into how AI can be effectively harnessed to enhance service delivery. Our aim is to encourage organisations to take the next steps towards more innovative, user-centric, and efficient models, using the **Business Technology Standard** as a proven framework that aligns strategic objectives, resources, and technology into a coherent and effective operating model.



Artificial Intelligence: The New Revolution in Society

Artificial intelligence (AI) has become a transformative force, reshaping society at every level—from individuals and communities to entire organisational structures. Many have compared the rise of AI to the Industrial Revolution of the early 20th century, as both have fundamentally altered the way people live and work. While the Industrial Revolution revolutionised manufacturing and transportation, unlocking new job opportunities and reshaping social structures, AI's impact extends even further, influencing nearly every aspect of human activity.

AI creates opportunities for both personal development and the modernisation of institutions. It enables individuals to enhance their skills, not only in fundamental areas but also in more advanced and creative disciplines. For example, AI can help individuals develop basic writing skills and elevate them into the realm of creative expression. Likewise, in professions requiring deep expertise, AI can act as a powerful assistant, making specialised knowledge more accessible and amplifying human capabilities.

This transformative power of AI has the potential to bridge skill gaps, allowing more people to develop expertise in a wide range of fields. However, those who effectively leverage AI will gain a competitive edge over those who do not. While AI can democratise knowledge, it can also create a new class of "super-experts"—individuals with existing deep expertise who use AI to push their skills even further. For example, experienced writers, analysts, and artists can use AI tools to accelerate their work processes, explore new creative directions, and generate insights or innovations that would have been previously unattainable.

The societal impact of AI may ultimately surpass that of the Industrial Revolution. Rather than simply changing physical structures and infrastructure, AI directly enhances human capabilities—boosting creativity, analytical thinking, and productivity in ways that redefine job markets and social systems. As a result, AI does not just benefit individuals but also provides new opportunities for organisations, including governments, universities, and service providers, to optimise human expertise and improve service delivery.

In this rapidly evolving landscape, the role of governance and regulation is crucial. Just as the Industrial Revolution led to labour movements and democratic reforms that reshaped political systems, the AI era requires proactive policymaking to ensure fair and inclusive access to its benefits. Organisations responsible for public services and have a key responsibility to create equal opportunities for AI adoption, ensuring that technological advancements serve all members of society.

AI presents a unique opportunity to enhance public services, and infrastructure, but its successful implementation requires careful planning, transparency, and shared ethical guidelines. The AI revolution is not merely a technological milestone—it is an opportunity to shape a more just and efficient society. Decision-makers must work to ensure that AI's benefits are distributed

equitably while addressing the ethical and social implications that have always been at the heart of responsible governance.

The Revolution of Productivity and Efficiency

Artificial intelligence (AI) is driving a radical shift in productivity at the individual, organisational, and societal levels. At the individual level, AI enhances knowledge-based work, making it possible to complete tasks in four days that once took five. This newfound efficiency is not merely about reducing working hours—it creates opportunities for professional growth, deeper analysis, and even improved work-life balance. AI enables people to perform their tasks with greater precision, impact, and creativity.

At the organisational level, AI-driven automation is streamlining workflows and optimising processes, leading to significant efficiency gains. Work can be completed faster, operational costs reduced, or even the value produced doubled—what is often referred to as the "2x effect." AI's ability to increase both effectiveness and impact is

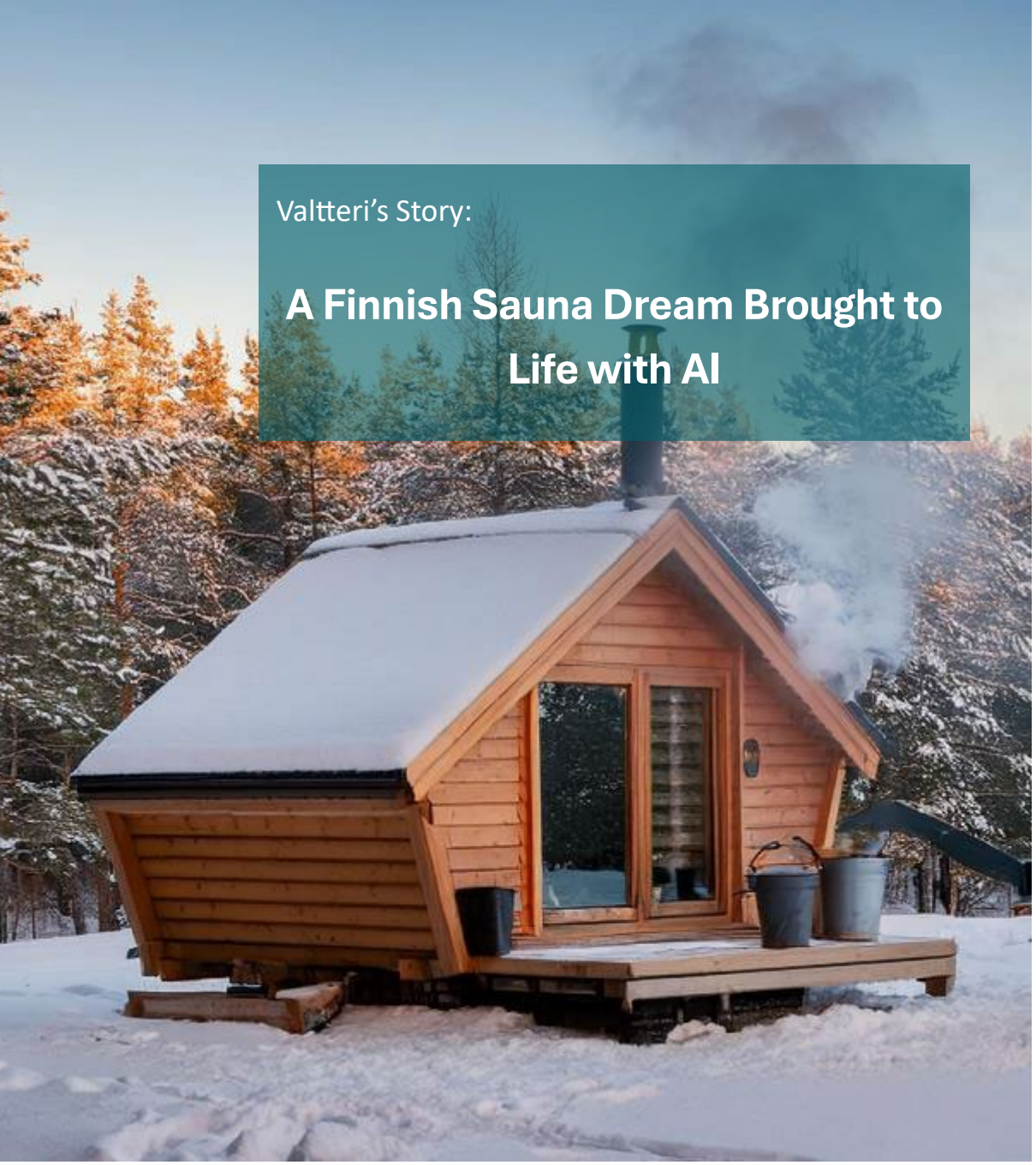
transforming how organisations function, making them more agile and capable of delivering higher-quality services.

On a broader societal scale, AI is not just improving existing processes; it is also giving rise to entirely new business models, services, and industries. The impact is particularly evident in how AI accelerates decision-making and operational efficiency. Tasks that previously took years to complete can now be finalised within months, monthly processes are reduced to weeks, and work that once spanned weeks can now be completed in days.

A striking example of AI's real-time benefits can be seen in urban traffic management. By dynamically adjusting traffic flows, predicting congestion, and optimising transport routes, AI-driven systems can significantly cut travel times while reducing emissions and improving overall quality of life for residents. These intelligent systems go beyond automation—they introduce adaptability, allowing cities to respond dynamically to changing conditions.

However, AI's transformative power is not solely a technological issue—it requires a fundamental shift in how organisations and societies approach decision-making and planning. Traditional hierarchical management and rigid planning structures are being replaced by agile, continuously evolving AI-powered models. These models provide real-time feedback loops, enabling organisations to adapt quickly to changes, continuously improve processes, and foster resilience in an unpredictable world.

AI's influence reaches deep into individual skill development, organisational structures, and broader societal systems. As a result, it is opening new possibilities that were previously unimaginable, fundamentally reshaping the way we work, govern, and innovate. The challenge now lies in ensuring that AI's benefits are maximised while addressing the ethical and operational considerations that come with such rapid change.



Valtteri's Story:

A Finnish Sauna Dream Brought to Life with AI

On a quiet evening in Mäntykylä, Finland, Valtteri Vihtanen sat at his kitchen table, sketching plans for his dream pihasauna—a small, 15-square-metre backyard sauna with an adjoining washroom. For Valtteri, like many Finns, the sauna was more than just a building; it was a place of relaxation, tradition, and connection to nature. However, before he could begin construction, he needed to navigate the city's building regulations.

Mäntykylä had recently updated its construction guidelines to align with new national regulations, and Valtteri wanted to ensure he was following the rules. Instead of calling city officials or visiting the local planning office, he turned to the city's AI-powered digital service. As he logged into the municipal website, a chatbot greeted him:

"Hello! How can I assist you today?"

Valtteri typed his query:
"I'd like to build a sauna in my backyard. What do I need to know?"

The chatbot responded promptly:
"Before we proceed, I'll need to verify your identity for security

reasons. This will allow me to access relevant zoning and property data."

After logging in through Finland's secure digital identification system, the AI assistant continued: "Thank you! I see you own a property at Mäntyrinne 10. A backyard building under 30 square metres does not require a separate building permit as long as it complies with zoning regulations and setback requirements. Would you like me to check your property's zoning details?"

With just a few clicks, Valtteri received precise information on zoning rules and property restrictions, eliminating the need for manual research. He uploaded his initial sauna blueprint into the system and used the city's interactive planning tool to test different placement options.

A moment later, the AI provided an analysis:
"Your planned sauna meets the building rights for your property. However, we recommend positioning it at least four metres from the property line. Your current plan is too close—please adjust the placement."

Valtteri modified his blueprint, moving the sauna further back on his property. The AI rechecked the layout and confirmed: "Now your design is compliant with regulations."

As his planning progressed, the system helped him navigate additional environmental regulations.

"Your sauna will have a water heater. Will it be connected to the main wastewater system?" the chatbot asked.

"No, it's a self-contained system," Valtteri replied.

"In that case, we recommend installing a small filtration system for wastewater treatment. Would you like to consult an environmental specialist?"

With a single click, Valtteri submitted a direct inquiry to the city's environmental department. The next day, he received a response confirming that his setup met local sustainability requirements.

Before beginning construction, the AI reminded him:
"Remember to submit a construction start notification to building control. You can do it here."

With another click, Valtteri sent his notification, and the AI automatically forwarded it to the right officials. A building inspector was automatically assigned to review his plans and scheduled an initial site visit.

A Stress-Free Construction Process

Throughout the construction phase, AI kept Valtteri informed of important deadlines, safety guidelines, and required documents. Whenever he needed an update, he could simply check the system instead of calling the city office.

Once the sauna was complete, the AI assisted him in submitting a final inspection request. A city inspector visited the site, confirming that everything met legal and safety standards. Impressed by how well-organised the process had been, the inspector remarked on the efficiency of the AI-powered system.

The First Sauna Session: A Moment of Appreciation

As Valtteri poured water over the hot stones, filling the sauna with comforting steam, he reflected on how effortless the entire experience had been. Thanks to Mäntykylä's AI-driven municipal services, what could have been a bureaucratic challenge had turned into a smooth and stress-free process.

Mäntykylä had demonstrated that modern technology and traditional values could seamlessly coexist—empowering citizens with digital tools while preserving cherished traditions like the Finnish sauna.

Artificial Intelligence Requires Holistic Organisational Development

The rapid rise of artificial intelligence (AI) has sparked both excitement and concern among organisations, leading many to draft AI strategies and roadmaps. However, organisations often realise that focusing solely on AI is not enough—a broader perspective is needed, one that involves rethinking the entire business strategy. AI is not a standalone solution or a shortcut to efficiency; rather, it is an integral part of holistic organisational development.

The Business Technology Standard (BTS) offers a comprehensive approach to integrating AI into an organisation's overall development. Designed to bridge business and technology, BTS provides best practices that help organisations identify the key business capabilities essential for AI adoption and prioritise them accordingly. This ensures that AI is used as a tool for planning and decision-making, rather than just an isolated project.

In this chapter, we explore the core principles and methodologies of the BTS framework that support effective and impactful AI deployment across different types of organisations. These principles

help seamlessly integrate AI into an organisation's growth path, whether in the public sector, private enterprises, or non-profit organisations.

1. Defining Strategic Development Goals (Must-Wins)

A fundamental principle of BTS is defining and prioritising strategic development goals. These goals serve as the foundation for planning development efforts and allocating resources efficiently. Beyond prioritisation, the primary objective is to ensure that all levels of the organisation—from individuals to leadership—share a common understanding of these goals and their significance. A shared vision enables alignment between personal, team, and organisational objectives, creating a structured approach to achieving long-term success.

Many strategic goals are directly or indirectly related to leveraging AI, but AI adoption alone is not enough. Success also requires investing in people's skills, redefining roles, and adjusting business logic to align with technological advancements. For example, when AI is introduced into customer service, it is not just about integrating new tools—it is essential to train staff to work alongside AI, ensuring that the technology enhances, rather than weakens, the customer experience.

Although AI can increase process efficiency by a factor of four, people generally need around six months to adapt to major changes. This highlights the need for holistic strategic planning that supports both technological implementation and human adaptation. Clear communication about these goals is also crucial to enhancing an organisation's readiness for change.

Ensuring Organisational Alignment

For an organisation to succeed, it is critical that strategic development goals are well understood by all stakeholders. When development efforts and resource allocation are guided by these clearly defined objectives, organisations can focus on what truly matters. BTS offers detailed guidelines in its Business Technology Strategy framework, which provides organisations with a structured approach to balancing technological and human factors in transformation initiatives. By taking this holistic approach, organisations can better navigate future challenges and ensure long-term success in an AI-driven world.

Paula Puisto – Leading the City's Digital Transformation

Paula Puisto, the Development Manager for Technical Services in the city of Mäntykylä, had a desk piled high with documents following the introduction of a new building law. The city had decided to modernise its building permit process to comply with new legal requirements while also improving the overall citizen experience. As a seasoned project manager, Paula knew that a transformation of this scale required clear objectives and efficient operational models.

To guide the project, Paula relied on the Business Technology Standard (BTS), a framework she had successfully used in previous initiatives to align business development needs with technological solutions. What she particularly valued in BTS was its holistic approach and emphasis on collaboration across different parts of the organisation. Addressing her team, Paula explained, *"BTS provides us with a clear framework to ensure that AI does not remain just an isolated tool but becomes seamlessly integrated into the city's services and overall strategy."*

Defining Strategic Development Goals

In the first project meeting, Paula and her team focused on defining the strategic objectives for the initiative. Inspired by the BTS framework, she emphasised the importance of aligning the goals with both the city's long-term strategy and practical service needs. Through discussion, three key priorities emerged:

1. **Citizen-Centric Services** – The permitting process needed to be accessible and user-friendly, enabling residents to handle tasks independently with the help of AI.
2. **Regulatory Compliance** – AI should be leveraged to ensure automatic adherence to laws and zoning regulations, assisting both residents and authorities in meeting legal requirements.
3. **Optimising Resources** – AI should focus on automating routine tasks, freeing up city employees to concentrate on more complex cases.

To bring these objectives into context, Paula introduced a real-world example: Valtteri Vihtanen's plan to build a backyard sauna. Addressing her team, she posed a challenge: *"How can we ensure that Valtteri gets all the information and approvals he needs from a single platform—without unnecessary paperwork or delays?"*

With these goals in place, Paula stressed the importance of a shared understanding across the project team. *"When everyone is aligned on what we are trying to achieve, we can allocate resources effectively and ensure that all components support one another,"* she noted. BTS played a crucial role in this process by helping prioritise development needs and integrate them into the city's broader strategic objectives.

By the end of the workshop, the team had documented the strategic goals, and each subgroup had been assigned clear responsibilities. Paula recognised that the next step—mapping the city's existing resources and data—would be critical to the success of the AI initiative. However, with the strategic foundation firmly in place, she felt confident that the project was off to a strong start.

2. An Integrated AI, Data, and Technology Strategy

Once strategic development goals have been established, the next crucial step is ensuring that the organisation's AI, data, and technology strategies are aligned under a unified approach. Successfully integrating AI into organisational processes is impossible without high-quality, well-structured data. The reliability of AI-driven decision-making depends directly on data integrity—incomplete or inconsistent data can lead to flawed analysis and weaken the trustworthiness of AI systems.

For AI adoption to succeed, it is essential to harmonise business technology (BT) and information technology (IT) strategies. This includes investing in skills development, fostering strategic partnerships, and selecting the right technology platforms. Off-the-shelf AI-enabled applications and platforms play an increasingly significant role, reducing organisations' dependence on custom software development. However, this shift requires a strategic focus on how new technologies impact core operations and essential competencies.

Merging AI, data, and technology strategies is not just a technical challenge—it also requires a cultural shift within the organisation. Strategies must align with overall business objectives while ensuring that employees and operational processes are prepared to embrace new ways of working.

This balanced approach allows organisations to fully leverage the potential of AI, data, and technology, while also ensuring long-term sustainability and operational efficiency. A well-integrated strategy creates a strong foundation for digital transformation, enabling organisations to stay competitive and adaptable in an increasingly AI-driven world.

3. AI Requires High-Quality Data

Generative artificial intelligence (AI) relies on four key components: language models, operational logic, data, and input prompts. The quality and compatibility of these elements determine how effectively AI can meet performance expectations.

At the core of AI software are language models and operational logic, which are designed by developers. While users have limited control over these components, continuous improvements through new versions enhance AI's ability to handle general queries and perform simple tasks without the need for additional data. For instance, in customer service, AI can answer basic inquiries—such as business hours or order statuses—using only its pre-trained models.

However, for more advanced applications, AI must leverage domain-specific data. In these cases, data quality becomes a critical factor—errors, inconsistencies, or incomplete information can weaken AI performance and lead to inaccurate results. Since most AI systems depend entirely on the data they receive, poor data quality can result in misleading outputs or even fabricated information.

The Role of Input Quality in AI Performance

Users play a vital role in shaping AI responses through input prompts. The clarity and specificity of a prompt directly affect the usefulness of AI-generated results. A vague query like *"Tell me about the weather"* will yield a generic response, whereas a more precise input, such as *"What is the weather forecast for Helsinki next weekend for outdoor activities?"*, provides significantly more relevant insights.

Mastering the skill of crafting effective prompts enhances AI interaction, making it a more valuable tool for decision-making and productivity. With practice, users can refine their input techniques, ensuring AI delivers more accurate and actionable responses.

Ensuring Data Integrity in AI Systems

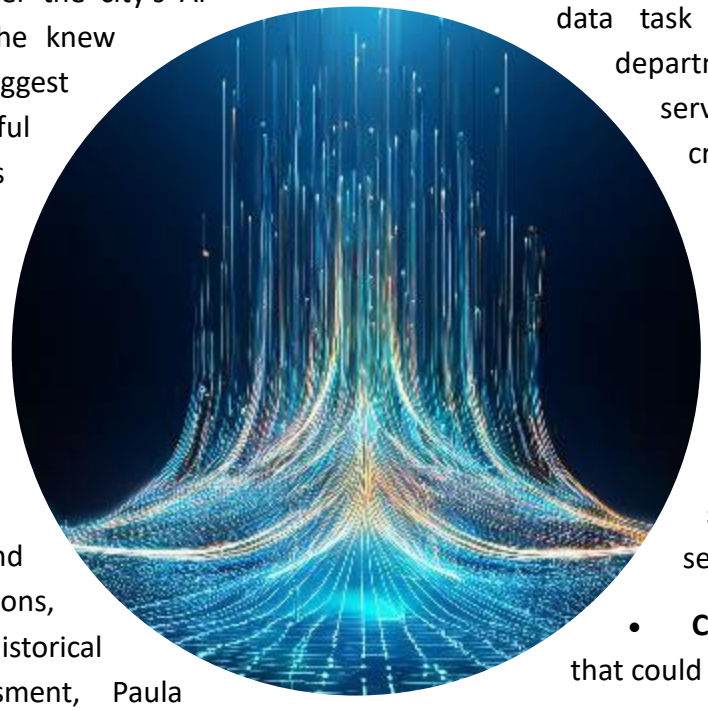
Even the most sophisticated AI platforms remain dependent on data quality. In closed systems—where data is strictly managed—the risk of errors and inconsistencies is lower, leading to more reliable AI-driven outcomes. In sectors such as industrial project management, AI can optimise workflows and scheduling, but only if it has access to consistent and trustworthy data.

To maximise AI's potential, organisations must ensure data accuracy, completeness, and consistency across all levels. Establishing clear ownership and governance structures for data management is essential. The Business Technology Standard's Data Governance framework provides practical tools for implementing effective data management policies.

By maintaining well-organised, high-quality data, organisations can minimise risks, enhance decision-making, and unlock AI's full potential—turning it into a powerful strategic asset for achieving business goals.

Data as the Foundation of AI

After defining the strategic objectives, Paula Puisto shifted her focus to ensuring the quality of the data that would power the city's AI system. From experience, she knew that poor or incomplete data was the single biggest factor that could prevent the successful implementation of AI. The Business Technology Standard (BTS) emphasises that data quality, integrity, and accuracy are critical to any AI-driven initiative. Addressing her team, Paula reminded them, *"AI can't make better decisions than the data it relies on."*



The first step was to map all the city's existing databases related to construction and permitting. This included zoning regulations, building rights, environmental policies, and historical permit applications. During this assessment, Paula discovered significant inconsistencies in how different departments stored and maintained their data. For example, environmental restrictions for certain plots were outdated, as updating these records had been deprioritised in favour of more urgent tasks.

Recognising the need for a coordinated approach, Paula assembled a data task force with representatives from the IT department, building supervision, and environmental services. Together, they defined key data quality criteria that needed to be met to ensure the AI system could produce reliable and accurate results. These included:

- **Timeliness** – All zoning and environmental data had to be updated to reflect the latest regulations.
- **Consistency** – Data needed to be stored in a uniform format to ensure seamless AI processing.
- **Completeness** – No critical gaps should exist that could lead to incorrect recommendations.

Improving data quality was a demanding task, but the team saw it as a necessary investment for the project's success. The environmental services team flagged a crucial issue: plots located in groundwater protection areas were not always properly marked in the database. Without this correction, the AI system would have been unable to identify restricted zones, potentially leading to incorrect permit recommendations. *"Details like this determine whether AI's advice is useful or completely wrong,"* Paula noted.

As part of the deployment plan, Paula allocated ongoing resources for data maintenance and updates. She reminded her team, *"AI isn't a one-time solution—its effectiveness depends on how well we continue to manage our data."*

The impact of high-quality data became clear in practice during Valtteri Vihtanen's backyard sauna project. Thanks to accurate zoning and permit data, the AI system was able to automatically verify construction regulations, reducing the need for direct contact with city officials. Early usage statistics showed that the AI system had already resolved multiple citizen inquiries without human intervention, freeing up building supervision staff for more complex cases. Seeing these results reinforced Paula's conviction that quality data was the backbone of the city's AI initiative.

4. Value Streams Execute Strategy

A value stream is a core organisational process that delivers value to customers and stakeholders while supporting strategic objectives. It can focus on enhancing customer experience, improving operational efficiency, or driving innovation. Value streams integrate business development needs with AI capabilities, ensuring a seamless and strategic approach to value creation.

AI does not function as a separate value stream—instead, it is embedded across all value streams, enhancing their execution and introducing new possibilities. For instance, in a customer experience-focused value stream, AI can analyse customer behaviour, personalise communication, and predict customer needs. In an operational efficiency-driven value stream, AI can optimise logistics, monitor resource usage, and improve supply chain management.

Roles Supporting Value Streams

To ensure the effective use of AI and other key enablers, specific organisational roles are assigned to support value streams. These roles ensure that AI integration is strategically aligned and efficiently executed.

- An AI Lead oversees AI's strategic use and implementation across value streams.
- An Enterprise Architect manages the technical infrastructure that supports AI.
- A Data Owner ensures data quality and integrity, enabling AI to function optimally.

These roles operate across organisational boundaries, ensuring a cohesive and strategy-driven approach to value stream management.

Value Streams as Strategic Portfolios

Value streams function like portfolios, governed by portfolio management principles. Each value stream aligns with strategic development goals and prioritises initiatives based on their contribution to organisational objectives. This eliminates the need for a separate AI adoption plan, as AI is integrated into all value streams and strategy execution.

For example, in healthcare service development, one value stream might focus on enhancing patient experience through AI-driven predictive analytics and personalised treatment recommendations.

Another value stream might target process efficiency, using AI to optimise resource allocation and reduce waiting times.

By aligning value streams with a shared strategy, organisations can ensure efficient AI adoption, resource optimisation, and goal achievement. This holistic approach maximises the impact of AI, ensuring that resources are strategically allocated where they generate the most value.

Paula Puisto: Value Streams as a Solution for Resource Management

As the project progressed, Paula Puisto realised that decision-making in the building permit process was often slow and complex. The initiative involved multiple city departments—technical services, environmental management, and customer service—each with its own priorities and resources. This misalignment sometimes led to delays, such as when updating the data required for the AI system. The issue stemmed from unclear responsibilities and resource allocation between departments.

Paula began exploring long-term solutions to streamline these processes. She was already familiar with the Business Technology Standard (BTS) and its value stream approach, which integrates strategic objectives and resource management into a cohesive operational model. Unlike traditional structures, value streams do not function within individual departments but instead align all relevant stakeholders and resources towards a shared goal.

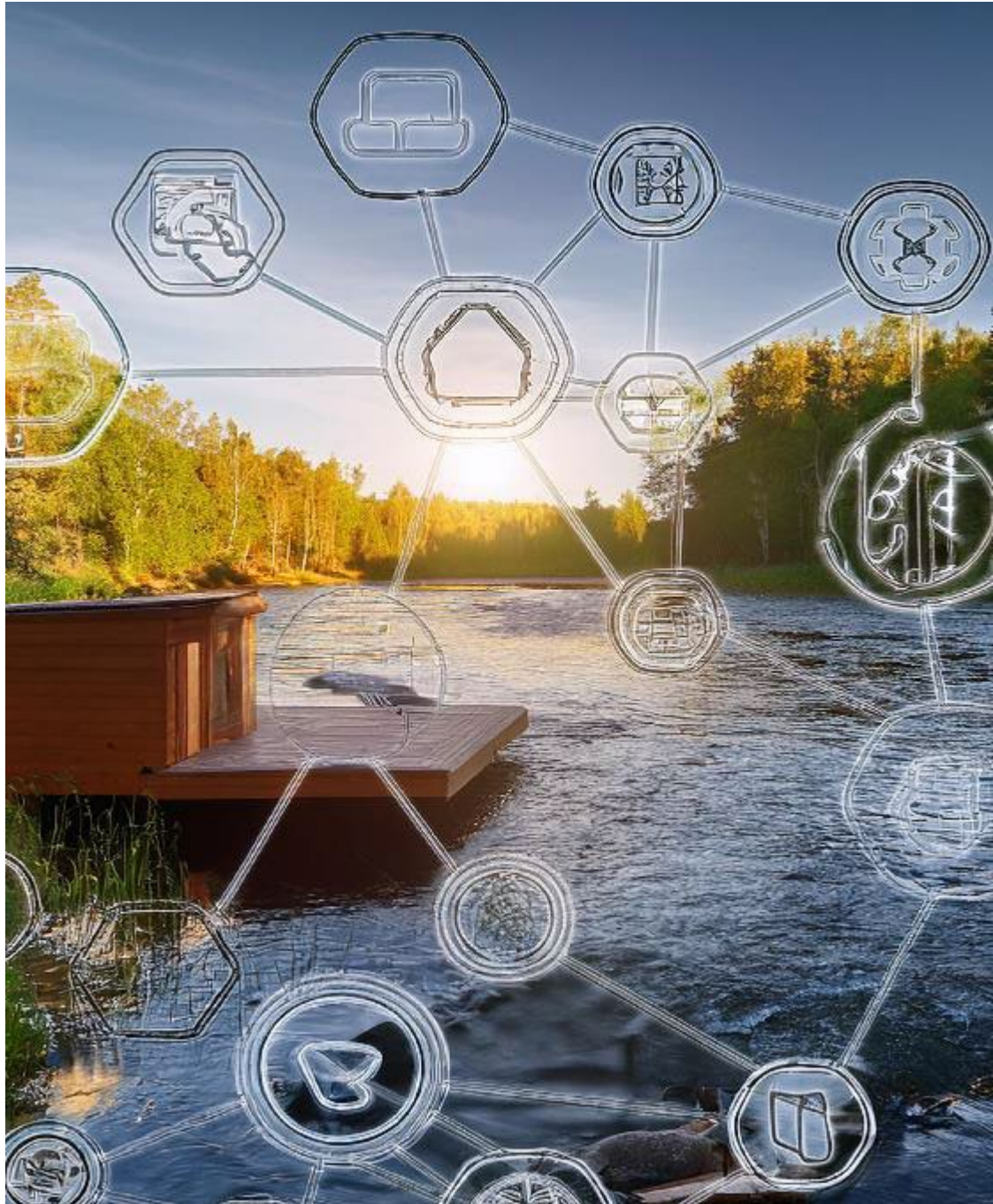
During a discussion with city leadership, Paula highlighted the building permit process as a prime example of how decision-making could be improved. She proposed implementing a value stream approach in future projects to ensure that resources were allocated based on strategic priorities, eliminating the need for constant cross-departmental negotiations.

She saw data management as a key area where value streams could have immediate impact. In her project, data quality improvements had proven challenging due to limited resources in environmental management and unclear responsibilities within technical services, which ultimately slowed down AI implementation. She argued that if decisions and resource allocation were handled at the value stream level, such issues could be resolved faster and more effectively.

Although value streams were not fully implemented in this project, Paula submitted a formal recommendation to city leadership, suggesting a pilot project where the concept could be tested—possibly within the broader digitalisation of construction processes.

She emphasised that value streams could serve as a bridge between the city's strategic vision and its practical execution.

A concrete example of the potential benefits of value streams was seen in Valtteri Vihtanen's backyard sauna project. While the AI system successfully integrated data from multiple city departments to provide a smooth experience for the resident, internal decision-making remained fragmented and complex. Paula believed that by adopting value streams, the process could become not only more transparent and seamless for citizens but also more efficient and strategically managed within the city administration.



5. Planning with AI

Artificial intelligence (AI) is revolutionising development planning by making it faster, more precise, and more accessible to those responsible for business and organisational growth. AI enhances planning by processing high-level descriptions provided by humans and transforming them into detailed plans. This capability enables even complex development projects to be broken down into manageable parts, providing a clear overall picture from the earliest stages.

AI does more than just assist with planning—it can also leverage pre-built functionalities available on application platforms. This accelerates implementation, testing, and deployment, as AI is able to automatically consider the constraints and capabilities of the technology in use. By integrating AI into planning, the process becomes more engaging and meaningful for business experts. Instead of merely participating in planning discussions, they can actively contribute and take ownership of outcomes, increasing the practicality and feasibility of implementation.

The Business Technology Standard (BTS) further enhances AI-assisted planning by providing intuitive methodologies designed for business-driven development. The Demand Planning and Management framework within BTS offers structured approaches that help business professionals work efficiently with AI, ensuring that business needs and technological solutions align seamlessly.

The benefits of AI-driven planning extend beyond speed and efficiency—it also improves the quality of outcomes. For both businesses and the public sector, this means not only cost-effective processes but also a greater ability to respond to changing needs and expectations.

Paula Puisto: User-Centric Planning with AI

After defining strategic objectives and ensuring data quality, Paula Puisto turned her attention to the next critical phase: leveraging AI in user-centric planning. The Business Technology Standard (BTS) emphasises that human-centered design is not just a step in the process, but a fundamental approach that ensures development efforts address real user needs in an intuitive and accessible way. Paula saw this as especially important, as the modernisation of the building permit process would directly impact residents like Valtteri Vihtanen, who was planning to build a backyard sauna.

To capture user needs, Paula formed a design collective consisting of representatives from technical services, environmental management, customer service, and a resident advisory group. The goal was to map out pain points in the building permit process and identify where improvements were needed. Through discussions, they created user journeys, detailing each step a resident would take—from information gathering to project completion.

For example, in Valtteri's case, the journey began when he searched for zoning regulations on the city's website. The design collective used AI to analyse which information was hardest to find and at which points users typically encountered difficulties. AI-driven analysis revealed that residents struggled to understand complex zoning restrictions, and many expressed the need for more visual tools, such as interactive maps and diagrams to better understand building limitations.

Based on these findings, the team developed an interactive tool that allowed Valtteri to visually explore the best placement for his sauna on his plot. Paula also incorporated AI to improve user interaction during the planning phase. AI was used to automatically suggest enhancements for the city's digital services, identifying bottlenecks in the system. Simulations of user journeys showed that many applicants became stuck at the stage where environmental regulations had to be checked in a separate system. In response, the team integrated environmental data directly into the main platform, eliminating the need for users to switch between multiple services.

User-centric design went beyond technical efficiency—it also considered emotions and the overall user experience. In Valtteri's

case, AI was programmed to respond in a clear and reassuring manner, providing friendly and supportive guidance when he inquired about building restrictions. By using natural and empathetic communication, the system helped build trust in the city's digital services.

Reflecting on the process, Paula realised that combining AI with human-centered design did more than just streamline operations—it significantly improved the resident experience. Through user journey simulations and cross-functional collaboration, the team ensured that the building permit process was not only efficient but also approachable and user-friendly. This outcome was not accidental, but the result of deliberate planning, where the needs of residents like Valtteri remained at the heart of development.

6. Assessing the Suitability of AI

Once the initial planning phase is complete, the next critical step is to evaluate whether AI is suitable for the intended use case. The success of AI implementation depends on multiple factors, including legal regulations, data quality and availability, and the specific characteristics of the operational environment.

One major limitation in AI adoption is data protection legislation, which imposes strict requirements on handling personal data. This is particularly relevant in sectors such as healthcare and finance, where safeguarding sensitive information is essential.

Data Quality and Reliability

A key aspect of AI suitability assessment is ensuring high-quality, reliable data. Incomplete or inaccurate data can compromise AI's ability to deliver trustworthy results. In some cases, AI may generate hallucinations, meaning it produces entirely false or fabricated information.

For example, if an AI-powered customer service chatbot operates on an incomplete or outdated database, it may provide misleading

answers, ultimately damaging customer trust and the organisation's reputation. In such cases, AI should serve only a supporting role, with human oversight remaining essential.

AI is most valuable when it outperforms humans in a given task. For instance, in large-scale data analysis, AI can identify patterns and insights that would be too complex or time-consuming for a human analyst. Additionally, if AI's total cost—including development and maintenance—is lower than alternative solutions, its suitability increases.

Impact on User Experience and Ethical Considerations

User experience is another critical factor in AI adoption. For example, AI-driven chatbots can improve customer service efficiency, but only if they provide clear, accurate, and user-friendly responses. If customers find AI difficult to interact with or unreliable, its benefits may be diminished.

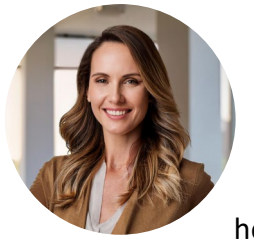
Ethical considerations also play a central role in AI suitability assessment. AI systems must be transparent and free from bias. For example, in AI-powered recruitment, it is essential to ensure that data and algorithms do not reinforce discrimination or unfair hiring practices.

Additionally, issues related to data ownership and intellectual property rights must be clearly defined—especially if AI processes external data sources or generates content for commercial use.

Balancing Risks and Benefits

Ultimately, the suitability of AI depends on how well it integrates into the intended use case and whether it adds value without introducing significant risks. The evaluation phase should focus on identifying potential limitations and designing processes that ensure AI supports both organisational goals and legal and ethical requirements.

The Business Technology Standard (BTS) offers practical tools and frameworks to support this AI suitability assessment, helping organisations make informed and responsible adoption decisions.



Paula Puisto: Carefully Defining AI Use Cases

As the planning phase progressed, Paula Puisto and her team paused to consider a critical question: Is AI the right solution for all planned use cases? The Business Technology Standard (BTS) emphasises that evaluating AI suitability is an essential step before broader implementation. Paula knew that careful assessment would help avoid situations where AI was inefficiently applied or introduced more problems than solutions.

To ensure a structured approach, Paula assembled a working group to review each proposed AI use case and assess its feasibility. The team focused on data quality and availability, as well as any legal or ethical constraints that might limit AI deployment. Some tasks, such as interpreting environmental regulations and verifying building rights, were clear candidates for AI, as they relied on strict rules and numerical data. However, situations requiring human judgement or subjective decision-making were classified as areas where AI would play only a supporting role.

A practical example emerged during the review of Valtteri Vihtanen's backyard sauna project. The AI system was able to automatically verify whether Valtteri's planned sauna complied with zoning regulations and setback requirements. This use case was straightforward and highly reliable, as it was based on predefined rules. However, when Valtteri asked whether his sauna would impact groundwater conditions, AI could only provide general guidelines and recommend that he consult an environmental expert. Paula stressed to her team, *"It's essential that AI understands its limits and directs users to the right experts when human judgement is required."*

The team also considered the cost-benefit balance of AI implementation. They analysed whether AI would generate significant cost savings or efficiency improvements to justify its adoption. Their findings showed that AI provided the greatest benefits in repetitive, data-intensive tasks, such as land use data analysis and automatic document verification. More complex processes, where AI required continuous learning and refinement, were set aside for future implementation when additional resources became available.

Paula also ensured that ethical considerations were part of the evaluation process. She emphasised that AI should provide accurate

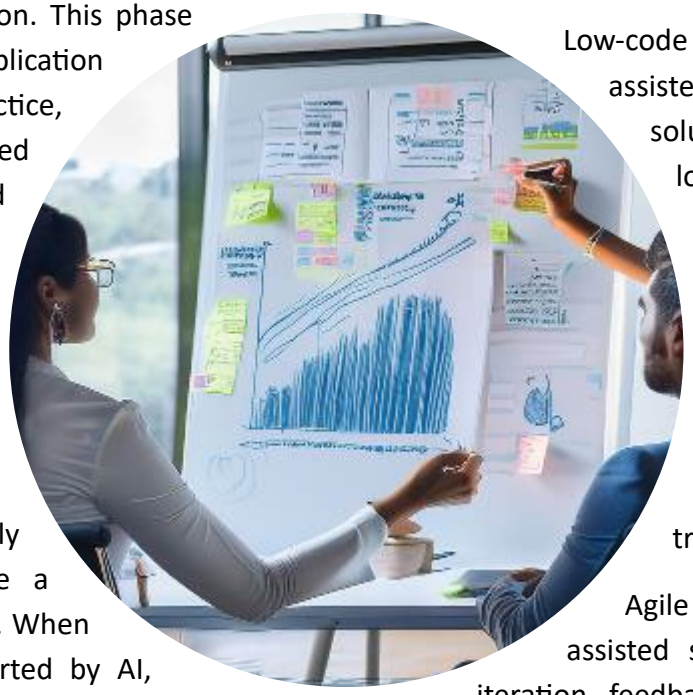
and reliable answers and must not rely on outdated or incorrect data. She reminded her team, *“Trust is everything. If AI delivers poor-quality responses, we risk losing public confidence in the system.”*

At the end of the evaluation phase, Paula documented clear recommendations outlining where AI should be applied and where human oversight remained essential. A feedback mechanism was also introduced, allowing users to report AI-related issues or misunderstandings for further refinement.

The result was a balanced and well-structured plan that leveraged AI’s strengths while acknowledging its limitations. This careful approach provided a solid foundation for a trustworthy and effective AI implementation, ensuring both system reliability and citizen satisfaction.

7. Developing Solutions with AI

Once the AI use case has been designed and its suitability confirmed, the next step is to implement the solution. This phase transforms initial plans into a functional application that meets predefined needs. In practice, planning and implementation can proceed simultaneously in an interactive and iterative manner, following agile development principles. This approach allows for flexibility and rapid progress, as plans and solutions can be continuously refined throughout the development process.



AI-assisted development can significantly shorten the time required to produce a solution compared to traditional methods. When both planning and execution are supported by AI, organisations can transition from concept to working application much faster than with conventional agile development cycles. AI can convert high-level plans into technical specifications, suggest solution architectures, and even generate code templates automatically. This accelerates prototyping and testing, enabling development teams to focus on fine-tuning and quality assurance.

Low-code and no-code platforms play a key role in AI-assisted development, allowing users to build complex solutions without deep programming expertise. This lowers the barrier for participation, enabling business users to contribute ideas and speeding up development cycles. In public administration, for example, AI could power a system that automatically analyses citizen feedback, identifying key improvement areas for decision-makers. Using AI, such a system could be developed faster and with fewer resources than traditional methods.

Agile development methodologies align well with AI-assisted solution creation, as they support continuous iteration, feedback utilisation, and flexible prioritisation. AI can enhance each stage of development by analysing stakeholder feedback, suggesting next steps in the development process, and

optimising project priorities. The Business Technology Standard's guide on Business Acceleration with No/Low-Code Platforms outlines best practices for combining AI capabilities with agile methodologies. This approach is particularly valuable when speed and flexibility are critical, but quality and user experience remain top priorities.

An energy company seeking to develop an AI-powered energy demand forecasting system could leverage AI to design and implement the solution while incorporating real-time data and weather forecasts to generate precise energy demand predictions. This not only expedites deployment but also improves the company's ability to meet customer needs and optimise resource use.

By integrating AI into development processes, organisations can achieve faster, higher-quality, and more cost-effective solutions, unlocking a new level of efficiency and innovation.

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Paula Puisto: Implementing the Solution with an AI Platform

As Paula Puisto's team moved into the implementation phase, they had a significant advantage: the city already had an AI-enabled no-code application platform in place. This platform had been used in previous municipal projects and provided a strong foundation for developing the chatbot and other AI-powered services. However, this did not mean that the process was fully automated—the platform still needed to be trained with the right data and adapted to the city's specific requirements.

To guide the project, Paula relied on Business Technology Standard (BTS) development methodologies. Drawing from previous experiences with agile development, the team adopted an iterative approach, testing and refining the solution step by step. The application platform significantly accelerated the development process by offering pre-built interfaces for integrating data from multiple city departments.

The first key task was training the AI to use city data from building supervision, environmental regulations, and zoning laws. Paula defined the chatbot's primary role: to help residents quickly and easily find relevant information. The team uploaded historical user queries and trained the AI to identify the most common needs, such as plot-specific building restrictions and environmental regulations. This streamlined the chatbot's deployment, as it quickly learned to apply regulations based on user input.

The no-code functionality of the platform also lowered the barrier for non-technical experts to contribute to the development process. Paula observed that specialists from environmental services and building supervision were able to add or update regulations themselves, without needing advanced programming skills. This ensured that every expert could directly influence the system's content, making it more precise and relevant.

Despite these advantages, challenges arose during development. Some data sets were initially incomplete, and not all necessary information was immediately available for AI training. Paula followed BTS resource allocation recommendations, organising cross-

departmental collaboration to standardise and complete the data. This allowed AI training to proceed without major delays.

Since the solution would be used by both city employees and residents, Paula recognised the need for change management. She proposed a structured training and communication strategy to ensure that all stakeholders understood the system's benefits and functionality. While these efforts would come into full effect at a later stage, Paula was confident that change management would be critical for a successful rollout.

Once the first version of the chatbot was ready, the team began pilot testing with real-life scenarios, including cases like Valtteri Vihtanen's backyard sauna project. Based on user feedback, the AI system was continuously refined and expanded, adding new features step by step. In line with BTS continuous improvement principles, development remained flexible and responsive to changing user needs.

Ultimately, Paula was pleased with the speed and efficiency of the solution's implementation. Addressing her team, she reflected, *"The ready-made application platform and BTS methodologies were invaluable in this project."* She believed that the new AI-powered building permit process not only improved efficiency and accuracy but also enhanced resident satisfaction by offering a modern, user-friendly service.

8. AI Simplifies Testing

AI-powered solutions are inherently less prone to errors than those developed solely by humans, as AI can account for a significantly broader range of variables and complex rules without human mistakes. This reduces the need for extensive corrective testing, thereby accelerating the development process. At the same time, AI provides powerful tools that make comprehensive and thorough testing easier and more efficient. Automated test case generation and execution can be performed much faster and with greater accuracy than traditional methods.

The most significant advantage of AI in testing arises when business stakeholders are actively involved in defining functional requirements and simulating workflows with AI support even before implementation and testing begin. This proactive approach ensures that the solution aligns precisely with business needs and functional expectations, minimising the need for revisions and redesigns in later phases. AI can create virtual workflows and simulate different user scenarios, allowing potential issues and gaps to be identified early in the design phase.

When specifications and implementation are closely integrated, and early solution iterations can be demonstrated and tested with business users, functional shortcomings and inconsistencies can be detected well before the formal deployment phase. For example, in the development of a customer service platform, AI can generate an early version of a chatbot that business representatives can interact with and provide feedback on before the final solution is completed. This reduces the risk that the final product fails to meet user expectations or lacks essential functionalities.

Application platforms are particularly useful in this regard, as their built-in functionalities can be tested and showcased at the beginning of the development process. This increases transparency in development and enables an iterative approach, where the solution evolves step by step towards its final form. For example, in logistics system development, an application platform can offer ready-made modules such as warehouse management and route optimisation, which can be tested and customised before being fully integrated into the organisation's operations.

AI-assisted testing not only enhances the quality of the final solution but also improves efficiency and speeds up deployment. This

approach reduces unnecessary rework in later stages and ensures that the final product meets both business objectives and end-user expectations.

Paula Puisto: Ensuring Testing Quality with AI

Once the first version of the solution was ready, Paula Puisto directed her team's focus to testing, knowing that quality assurance would determine the system's success. The Business Technology Standard (BTS) emphasises the importance of testing as part of the development process, ensuring that functional gaps are identified and addressed before deployment.

To improve efficiency, Paula incorporated AI-driven test automation. AI analysed past error cases and identified critical scenarios, such as how zoning restrictions affected smaller construction projects. This accelerated the testing process and reduced the need for manual work. AI also simulated thousands of user queries, verifying that the system could provide accurate and consistent responses.

Beyond functional accuracy, the team prioritised user experience. AI analysed user journeys and detected points where users experienced confusion or delays. For example, the environmental regulation check was initially too complex, leading to navigation improvements based

on AI insights. These findings were further refined using feedback from pilot users.

One of the most valuable aspects of AI-driven testing was its ability to simulate realistic user scenarios where different functionalities interacted. This helped uncover a critical issue: the chatbot failed to account for special cases, such as building permits in groundwater protection areas. After refining the dataset, the system was updated to provide precise and legally compliant guidance.

Following the BTS principles of continuous improvement, Paula ensured that her team made rapid enhancements based on test results. This iterative approach minimised errors and guaranteed that the system would meet user needs from day one.

By the end of the testing phase, Paula and her team were confident that the system was ready for deployment. Summarising the process, she remarked, *“Thanks to testing, we know the system doesn’t just function—it meets user expectations.”* The AI-driven testing approach proved that automation can streamline complex processes while still supporting user-centric development, marking another major step forward in modernising the city’s building permit process.

9. AI Supports Deployment

While AI's role in implementation and testing may go unnoticed by business users, it becomes particularly significant during the deployment phase. AI can rapidly generate high-quality training and communication materials, tailored to different user groups. Content and language can be adjusted based on audience needs, making the materials more accessible and impactful. Technical personnel may require training materials focused on process details, while end users benefit from guidance that emphasises ease of use and practical benefits.

If an application platform has been used in development, the solution likely includes AI agents that handle tasks previously managed by humans. This reduces the human workload but also highlights the need for change management. In financial management systems, for instance, AI agents may process invoices and detect anomalies, leaving human employees responsible only for handling exceptions. In such cases, job roles evolve, and employees must adapt to new ways of working. Clear communication and structured training are essential to facilitate this transition.

It is important to recognise that while AI accelerates development and deployment, human adaptation to change remains limited. AI agents can instantly learn new processes and logic, but employees require time, practice, and continuous support to adopt new operational models. This difference in adaptation speed underscores the importance of change management. In a service organisation implementing an AI-powered customer support system, employees must learn to work alongside AI tools, refining or correcting AI-generated responses as needed.

The cost savings and rapid scalability offered by AI may tempt organisations to push for fast-paced deployment. However, this can result in change fatigue among employees or an incomplete adoption process if people have not had sufficient time to adjust to new workflows. A balanced approach is necessary, combining AI-driven efficiencies with carefully planned communication and support strategies.

AI can also provide ongoing support after deployment. Interactive guidance systems, such as AI-powered chatbots, can answer user questions and offer step-by-step instructions on system usage. This

reduces the need for extensive training sessions while ensuring that employees feel confident using the new system.

AI's role in deployment is both diverse and essential. It enables faster creation of training materials, facilitates user adaptation, and ensures that organisational change is perceived as a positive and beneficial development. Beyond reducing human workload, AI paves the way for new, more efficient, and highly effective operational models.

Paula Puisto: A Smooth Rollout with AI Support

Following the testing phase, Paula Puisto and her team prepared for the rollout of the new system, which would be used by both residents and city employees. Paula understood that success depended not only on technical readiness but also on how well users adapted to the system. AI played a crucial role in ensuring a smooth transition by generating customised training materials tailored to different user groups. Residents received step-by-step guides, while city employees were provided with more in-depth resources explaining system functionalities. AI's ability to personalise information based on individual needs accelerated learning and enhanced user experience.

For example, Valtteri Vihtanen, who was navigating the building permit process for his backyard sauna, received automatic reminders about his next steps. Meanwhile, training sessions for city employees were structured around their specific roles and responsibilities.

The AI-powered chatbot remained active throughout the rollout, answering the majority of user inquiries automatically while redirecting more complex cases to the appropriate specialists. This reduced pressure on customer service teams, allowing city employees to focus on higher-priority tasks.

In addition to direct user support, real-time AI analytics helped Paula and her team quickly identify potential issues and address them before they escalated. While the rollout was not without challenges—some users preferred in-person guidance—additional training sessions and the chatbot's user-friendly responses quickly helped build confidence among residents and employees.

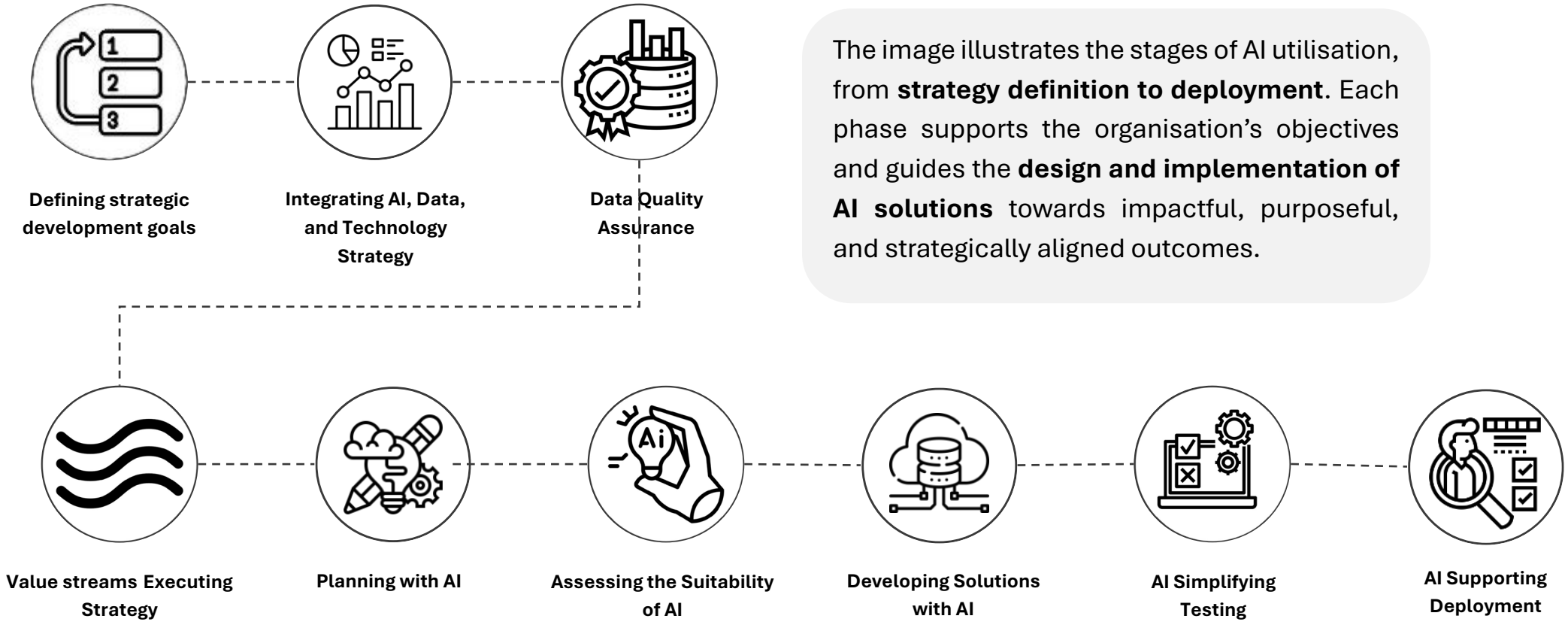
Paula was particularly pleased that AI had proven to be more than just a technical tool; it had become a genuine support system for users, making the learning curve smoother and the overall experience more reliable. The successful rollout demonstrated that careful planning combined with AI-driven support could significantly enhance the efficiency and accessibility of city services.

Summary

Artificial intelligence (AI) offers vast opportunities to enhance operations from planning to implementation. It speeds up processes, reduces errors, and improves accuracy, particularly in tasks requiring the handling of large amounts of data. With AI, plans can be quickly refined into detailed and structured solutions, testing can be automated comprehensively, and system changes can be efficiently executed. During deployment, AI can also generate high-quality, user-specific training materials, supporting the adoption of new systems.

However, AI alone is not enough—its successful utilisation requires careful planning, suitability assessment, and a strong focus on human needs. People learn and adapt to new processes more slowly than AI processes information, making clear communication, targeted training, and well-planned change management essential.

When used correctly, AI does not just enhance organisational efficiency; it can also improve user experience and support sustainability goals. AI is not just a technological tool—it is an opportunity to rethink processes and business models in ways that align with strategic objectives and increase organisational resilience in a rapidly changing environment.



The image illustrates the stages of AI utilisation, from **strategy definition to deployment**. Each phase supports the organisation's objectives and guides the **design and implementation of AI solutions** towards impactful, purposeful, and strategically aligned outcomes.

Final Reflections: Paula and Valtteri

After a few months of the system being in use, Paula Puisto took a moment to review the results. Feedback had been plentiful and largely positive. Residents appreciated that what had once seemed like a complicated building permit process was now straightforward and easy to navigate. City employees, in turn, valued the support AI provided, as it had reduced routine tasks and freed up time for more important work.

"This project has been a major step forward for us," Paula told her team at the end of a meeting. *"It wasn't just a technology project—it was proof that a citizen-centric approach combined with strategic thinking can transform the way a city operates. AI hasn't replaced people; it has given us tools to serve residents better."*

Meanwhile, Valtteri Vihtanen sat on the terrace of his newly built backyard sauna, reflecting on how the process had started. Initially, he had been unsure about what the new system would bring, but the AI-powered service had made everything surprisingly easy. All the necessary information had been available in one place, and the AI had provided clear recommendations while reminding him of the next steps in the process.

"Without this system, the whole process would have been much more difficult," Valtteri thought, enjoying the first löyly (hot steam) in his sauna. *"The construction went smoothly, and the city's services felt completely tailored to my needs."* He was especially grateful that the AI had been able to direct him to the right experts when his questions required deeper expertise.

Both Paula and Valtteri understood that this was just the beginning. Paula was already considering the next steps for expanding AI's role in city services, while Valtteri was simply pleased that his city had been able to provide him with a modern, user-friendly service. From both perspectives, one thing was clear: integrating AI into municipal processes was not just a technological innovation—it was a way to build a community where residents and city employees worked together to create a better everyday life.

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