

Artificial Intelligence (AI) Transformation Leadership Consulting Framework

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Abstract: In the current business landscape, organizational leaders are encountering unprecedented challenges driven by rapid technological advancements. These changes are poised to significantly transform the traditional methods of conducting business. To remain competitive and ensure their survival, organizational leaders must embrace the adoption of emerging innovations such as Robotics, Internet of Things (IoT), 3D Printing (3DP), Augmented Reality (AR), Virtual Reality (VR), and other technologies that are powered by Artificial Intelligence (AI).

To remain relevant and competitive during the 4th Industrial Revolution (4IR), companies need to update their technological tools and embrace effective AI transformation. Moreover, it is crucial to foster a company-wide shift in mindset to effectively implement AI technologies and lead the business in adapting to modern trends and advancements.

Farhan Murtza's Artificial Intelligence Transformation Leadership Consulting (AITL-Consulting) presents a strategic solution known as the Farhan-5As Application, which is tailored to assist organizations in effectively implementing artificial intelligence (AI) in their operations. The AITL-Consulting framework follows a structured and systematic approach comprising five stages: Analysis, Architect, Apply, Ascertain, and Adjustment.

The AITL-Consulting framework is designed to be user-friendly for consultants, making it easier for them to navigate and lead organizations through the complex process of AI implementation. By following the Farhan-5As Application, businesses can effectively harness the power of AI, enhancing efficiency, decision-making, and overall performance in the competitive landscape driven by emerging technologies.

Keywords: Artificial Intelligence, Digitalization, Transformation, Leadership, Consulting

Introduction

Foreword

In order to achieve effectiveness, businesses must operate with a consistent plan, framework, and well-defined processes. These essential components enable organizations to address current challenges while consistently generating value for their stakeholders. However, when it comes to AI implementation, many of today's organizations lack a clear path. This deficiency puts them at a disadvantage, especially as the innovations of the 4th Industrial Revolution continue to integrate into various industries and societies.

The emergence of the new AI era presents a unique opportunity for organizations to compete both locally and globally. To seize this opportunity, organizations must establish a robust framework and strategy for AI transformation. This requires the expertise of competent AI transformation consultants, whether they are internal experts or external advisors.

Farhan's white paper serves as a valuable resource, introducing a comprehensive framework that empowers consultants to confidently lead their clients' organizations through the AI transformation process. By implementing this framework, organizations can embark on their AI journey effectively and position themselves

as formidable competitors in the AI landscape.

In conclusion, the white paper highlights the significance of a consistent plan and approach in achieving success for businesses. It emphasizes the need for a clear roadmap for AI transformation and the involvement of skilled consultants to guide organizations in this transformative journey. By embracing the opportunities presented by the AI era, businesses can remain competitive and navigate the challenges brought forth by the 4th Industrial Revolution.

Desk Review

AI Transformation (AI-T)

It (AI Transformation) is a process that involves leveraging AI technologies to create new or modify existing business processes, organizational culture, and customer experiences in response to evolving market demands. This adaptation of business practices in the modern era constitutes an AI transformation.

AI transformation is defined as the incorporation of emerging digital technologies to enhance a company's business model, products, or organizational structures. It stands as a prevalent and significant managerial challenge for established firms in the past and upcoming decades. However, to fully harness its transformative potential, the amalgamation of digital capabilities must be complemented by the expertise and skills of professionals and executives. AI transformation necessitates a synergy between technological advancements and the capabilities of individuals within the organization.

Significance of AI Transformation

AI transformation's significance in businesses is to revolutionize various aspects of operations and decision-making. It offers automation of repetitive tasks, data analysis for informed decisions, personalized customer experiences, predictive analytics for market insights, and enhanced fraud detection and security measures. AI optimizes supply chains, accelerates product development, and drives process optimization, giving businesses a competitive advantage. Embracing AI unlocks efficiency, innovation, and agility, propelling businesses toward success in the rapidly evolving digital landscape.

Technologies of AI Transformation

The technologies that drive AI transformation are diverse and constantly evolving, enabling businesses and industries to harness the power of AI in various applications. Some key technologies that play a significant role in AI transformation include:

Machine Learning (ML): Machine learning, a subset of AI, empowers systems to learn and enhance their performance through experience, without relying on explicit programming. ML algorithms examine vast datasets to detect patterns and use this knowledge to make predictions and decisions. This technology finds extensive application in image recognition, enabling computers to identify objects and scenes accurately. Additionally, ML drives natural language processing, facilitating communication between humans and machines. It is also integral to recommendation systems, suggesting products or content based on user preferences, and predictive analytics, forecasting future trends and outcomes. ML's versatility and adaptability make it a cornerstone of AI applications, revolutionizing various industries and enhancing human-machine interactions.

Natural Language Processing (NLP): Natural Language Processing (NLP) is a branch of AI that empowers machines to comprehend and interpret human language. By leveraging NLP, AI systems can process and analyze various forms of communication, including text, speech, and conversation. This capability enables the development of diverse applications such as chatbots, which engage in interactive dialogues with users to answer queries or provide assistance. NLP also underpins virtual assistants, which understand and respond to voice commands, enhancing human-machine interactions. Moreover, sentiment analysis employs NLP to assess the emotional tone of written text, allowing businesses to gauge customer opinions and feedback. Additionally, language translation systems utilize NLP to translate content between different languages, facilitating global

communication and breaking language barriers. NLP's widespread adoption has revolutionized how AI interacts with and comprehends human language, making it an essential component in various practical applications across industries.

Deep Learning: Deep learning, a subset of machine learning, draws inspiration from the human brain's neural structure and function, employing artificial neural networks to process and analyze data. With their ability to handle intricate patterns and massive datasets, deep learning algorithms have proven instrumental in critical tasks like image and speech recognition, where they can accurately identify and interpret visual and auditory cues. Furthermore, deep learning is pivotal in the development of autonomous vehicles, enabling them to navigate and make decisions based on complex sensory inputs. Its powerful capabilities also extend to advanced analytics, where it can extract meaningful insights from extensive data, revolutionizing industries and driving breakthroughs in artificial intelligence applications.

Computer Vision: Computer vision, a cutting-edge AI technology, empowers machines to interpret and comprehend visual data from the environment, encompassing images and videos. This capability finds diverse applications, including facial recognition, allowing computers to identify individuals based on facial features, and object detection, enabling the recognition and localization of specific objects within images or videos. In the medical field, computer vision aids in tasks like medical imaging analysis, assisting healthcare professionals in diagnosing diseases and conditions. Additionally, computer vision plays a pivotal role in autonomous systems, such as self-driving cars, as it enables these vehicles to perceive and interpret the surrounding environment, making critical decisions for safe navigation and operation. The power of computer vision enhances AI's ability to understand and interact with the physical world, revolutionizing industries and fostering innovations that benefit society.

Robotics and Automation: Robotics and AI-powered automation have revolutionized various industries by empowering machines to perform tasks in physical environments. In manufacturing, industrial robots enhance production efficiency by handling repetitive and labor-intensive tasks with precision and speed. In healthcare, service robots assist in patient care, medication delivery, and disinfection tasks, alleviating the workload of healthcare professionals and enhancing patient experiences. Similarly, in the hospitality sector, robots can provide room service, caretaker services, and cleaning tasks, offering personalized and efficient services to guests. The integration of robotics and AI-driven capabilities not only streamlines processes but also improves safety, quality, and overall operational performance in these sectors, showcasing the transformative potential of technology in physical task execution.

Internet of Things (IoT): The Internet of Things (IoT) is a network of interconnected physical devices and sensors that are linked to the internet, enabling them to collect and exchange data. This interconnected ecosystem generates vast amounts of data from various sources. Artificial Intelligence (AI) is deployed in IoT systems to analyze this data, uncover meaningful patterns, trends, and anomalies, and derive actionable insights. By leveraging AI in IoT, businesses can achieve enhanced automation and optimization of processes, making data-driven decisions that lead to increase efficiency, reduce downtime, predictive maintenance, and improve resource allocation, ultimately transforming industries and driving innovation.

Data Analytics and Big Data: In AI transformation, data analytics and big data technologies play a pivotal role in handling the massive volumes of data generated by various sources. These technologies facilitate the processing, storage, and analysis of these datasets, enabling businesses to extract valuable insights, identify emerging trends, and make data-driven decisions. By harnessing the power of data analytics and big data, organizations can enhance their understanding of customer behavior, optimize business processes, predict market dynamics, and develop innovative products and services, driving them toward more informed and successful outcomes in the rapidly evolving business landscape.

Cloud Computing: Cloud computing serves as a crucial enabler for AI applications, offering businesses a flexible and scalable infrastructure to harness the full potential of AI without the need for substantial upfront investments in hardware and software. By leveraging cloud services, organizations can access high-performance computing resources on-demand, accommodating the computational requirements of AI algorithms and large-scale data processing. This scalability empowers businesses to quickly scale up or down as needed, optimizing costs and

allowing them to focus on AI innovation, research, and development rather than managing complex infrastructure. Cloud-based AI solutions democratize access to advanced computing capabilities, leveling the playing field for businesses of all sizes to capitalize on the transformative potential of AI in solving complex problems and driving innovation across various industries.

Edge Computing: Edge computing is a paradigm that brings AI capabilities closer to the data source, eliminating the need to transfer vast amounts of data to distant cloud servers for processing. By processing data locally at the edge of the network, edge computing significantly reduces latency and enables real-time data analysis and decision-making. In IoT and other time-sensitive applications, this capability is crucial as it allows devices and systems to respond instantly to changing conditions and make critical decisions in real-time, leading to more efficient and agile operations. Edge computing's integration with AI empowers businesses to leverage the full potential of AI-driven insights without sacrificing speed and responsiveness, unlocking new opportunities for automation, predictive analytics, and enhanced user experiences.

AI Transformation process

During the 4th Industrial Revolution, businesses that undergo AI transformation will gain a strategic edge by attracting new customers and establishing a competitive advantage. To achieve this, organizations can take the following steps:

Step 1: Analyze

To board on a successful IA transformation journey, organizations must first assess their current position and desired destination. By answering the fundamental questions of "where they are now" and "where they want to go," organizations lay the foundation for determining the outcome of the game they will be playing in the AI landscape. This self-awareness and strategic vision enable them to chart a clear and purposeful course towards digital maturity, making informed decisions, and ultimately gaining a competitive edge in the ever-evolving business landscape of the 4th Industrial Revolution.

Step 2: Design a business strategy through the lens of AI

The digital business approach represents a holistic and comprehensive business strategy that goes beyond mere technology or marketing initiatives. It encompasses a data-driven and AI-powered transformation system, which plays a central role in shaping the organization's decision-making processes and operational framework. By leveraging data analytics and AI technologies, businesses gain valuable insights into customer behavior, market trends, and industry dynamics, enabling them to make informed and proactive decisions. Moreover, the digital business approach embraces agile methodologies, which prioritize flexibility, adaptability, and continuous improvement. This agile mindset empowers organizations to test ideas and assumptions swiftly, iterate based on real-time feedback, and stay responsive to rapidly changing market demands. As a result, the digital business approach fosters a culture of innovation and experimentation, allowing businesses to adapt to dynamic environments and seize opportunities in the 4th Industrial Revolution effectively. By combining data-driven AI transformation with agile practices, businesses can create a powerful synergy that not only enhances their operational efficiency and customer experiences but also positions them ahead of the competition in the digital age.

Step 3: Move beyond day-to-day activities to create capacity

The greatest challenge organizations face at this point is the continuous pressure and distractions posed by day-to-day operational activities. These routine tasks and ongoing responsibilities can consume significant time and resources, leaving little room for deeper thinking and strategic planning. However, for organizations to bring about meaningful and transformative change, they must allocate time and resources for profound thought and critical but non-urgent work. This entails dedicating efforts to long-term visioning, exploring innovative ideas, and developing strategies that will drive the desired transformation. Despite the relentless flow of daily tasks, making space for these essential activities is crucial to break free from the status quo, identifying opportunities for growth, and steer the organization towards the desired change. Without such deliberate focus on strategic thinking and non-urgent initiatives, organizations risk being trapped in a perpetual cycle of operational demands, hindering

their ability to adapt and thrive in today's dynamic and ever-changing business landscape.

Step 4: Bring your Team

The CEO's next crucial task is to lead his team on a journey of AI transformation. To achieve this, the CEO must momentarily set aside his own concerns and focus on understanding the needs of his people. By catering to the individual needs of the team members, the CEO can foster a sense of involvement and engagement in the transformation process, encouraging them to embrace and advocate for the new ways enabled by AI. In this way, the CEO gains the support and backing of his team, creating a powerful force driving the organization forward toward successful AI transformation. It is essential to recognize that AI transformation goes beyond managing the transition; it plays a pivotal role in aligning the team's aspirations and propelling the organization toward a brighter and more innovative future.

Step 5: Build Competencies

In the process of AI transformation, Top Management and HR must acknowledge the disparities between the current skills and knowledge of their workforce and the skills required to achieve the transformation agenda. Bridging these gaps becomes imperative, and this can be achieved by offering the necessary training and education to empower the employees. By equipping the workforce with the essential expertise, the organization can effectively navigate the transformation journey and unleash the full potential of its people in embracing and driving the desired change.

Step 6: Innovate

In the pursuit of becoming highly effective and innovative, organizations invest considerable time and effort in implementing new strategies and conducting observational experiments to determine their best opportunities for growth. By conducting these systematic exercises, businesses can identify areas where their prospects lie, allowing them to channel their creativity with laser-like precision. This focused approach maximizes the potential for developing a new and sustainable competitive advantage, positioning the organization for long-term success in the market. Innovation is not merely about dreaming up fanciful ideas; instead, it hinges on a foundation of facts, data, and strategy. By basing innovation on accurate market diagnoses and deep insights into customer needs and challenges, businesses can generate solutions that have a real impact and resonate with their target audience. This data-driven and strategic approach to innovation ensures that businesses do not fall into the trap of “blue sky thought,” which may be imaginative but lacks practicality and applicability in the real world. By leveraging data, facts, and well-crafted strategies, organizations can drive meaningful innovation that addresses market challenges, propels growth, and cements their position as leaders in their respective industries.

Step 7: Apply Technology

With solutions at hand, companies must break free from their comfort zones and embrace the implementation of innovative approaches. Forward-thinking organizations understand that the most effective way to address their strategic requirements involves leveraging advanced technology to a significant extent. By adopting a high-tech approach, these smart organizations can enhance their capabilities, streamline processes, and propel themselves toward greater efficiency, competitiveness, and success in the ever-evolving business landscape.

AI transformation does not always entail pursuing disruption as the ultimate goal. A prime example of this is Uber, a highly successful, innovative, and technology-driven company that did not disrupt the taxi industry as traditionally defined by Clay Christensen. Instead of completely upending the market, Uber competed actively and harnessed technology to provide a similar service to existing consumers. The true impact of disruption, according to Christensen, lies in attracting new customers and solving their problems uniquely. If an organization reaches the pinnacle of its network, retains customers, and addresses their pain points effectively, it can achieve significant success and transformation without causing traditional disruption in the market.

Leadership & AI Transformation

In the AI transformation of businesses, leadership plays a crucial role, focusing on four key themes: strategic vision and action, leading cultural change, enabling networks, and leading them.

Strategic vision and action are essential prerequisites in the initial phase of AI transformation. Leadership must provide a clear and compelling vision and set concrete priorities to guide the organization's digital journey. By emphasizing the direction and investing in strategic actions, such as experimental investments and fostering creativity and expertise, leaders drive digital development and innovation within the organization.

Leading cultural change is another critical aspect of digital business transformation. Leadership serves as the foundation for the organization's culture, encouraging innovation, risk-taking, experimentation, and agile processes. Recognizing that cultural change involves individual approaches and emotions, leaders foster trust within the organization, ensuring everyone is on board and invested in the transformation process.

Enabling leadership involves teaching and encouraging engagement in different leadership styles. Open partnerships and dialogue become vital in this context, as leaders respect and treat employees as experts in their respective roles. Coaching helps employees excel in their jobs while promoting their involvement in the AI transformation process is crucial to ensure active engagement and commitment from the workforce.

Furthermore, the role of networks is a significant shift in leadership required for successful AI transformation. Leaders must focus on consumer orientation and actively seek partnerships and collaborations with other organizations. Moving away from inward-looking practices, organizations need to reach out to customers and establish alliances to enhance operations and services, ensuring adaptability and competitiveness in the rapidly changing digital landscape. By embracing these themes and leading with vision, cultural change, and strategic collaboration, leadership plays a pivotal role in driving effective AI transformation in businesses.

AI Transformation Leadership

AI Transformation Leadership represents a paradigm shift in the business landscape, going beyond merely implementing new technologies. It adopts a holistic approach that encompasses all aspects of the organization, including business strategy, technology integration, and people engagement, as emphasized by the Center for Creative Leadership. With a clear vision, it sets the direction for the business, ensuring that technology is aligned with processes seamlessly, and it fosters a culture where people are attentive to opportunities for AI transformation.

AI Transformation Leadership can be likened to a three-legged table, where each leg represents a crucial component: business direction, technology alignment, and people's involvement. When these elements are perfectly balanced, the organization remains stable, resilient, and capable of thriving in the dynamic landscape of AI transformation. Embracing AI Transformation Leadership equips organizations to navigate the complexities of technological advancements, drive innovation, and unlock the full potential of it, positioning them as leaders in their industries and paving the way for future success.



Postulation

We propose an AI Transformation Leadership consultancy system that can be effectively implemented by consultants in a systematic manner. This step-by-step working scope guides the transformation of client companies into AI-driven organizations. Below is an overview of the 5As AI Transformation Leadership Consulting Process:

1. Analysis:

The initial phase involves conducting a comprehensive evaluation of the client company's strengths and conducting an analysis across three crucial dimensions.

1.1. Technology: We assess the technologies currently implemented or planned for adoption in the client's industry to identify any gaps in their technological landscape. Additionally, we analyze competitors' technology usage and maturity levels, gaining insights into consumer behavior and their digital transformation needs and preferences. Furthermore, we research external suppliers and their technology offerings available within the industry.

1.2. Processes: We thoroughly examine the primary and secondary value chain processes to assess their suitability in light of technological advancements. This analysis aims to identify areas that may be static, burdensome, or slow, with the goal of optimizing processes to align with the demands of technology.

1.3. People: Our evaluation extends to the people including the CEO of the client company, focusing on their knowledge, readiness, and digital transformation skills. Understanding the level of preparedness of key leadership members is crucial in planning a successful AI transformation journey.

2. Architecture

Our Architecture refers to the organization's strategic approach to AI transformation.

The mission of AI transformation clarifies the reasons behind the company's shift towards AI, outlining the value it aims to create for consumers, employees, and the optimization of organizational processes. On the other hand, the roadmap outlines the company's envisioned AI transformation in the near future, detailing the expected changes and advancements.

The AI Transformation Scope Statement encompasses the entire engagement in the AI transformation, defining the job scope, deliverables, and stakeholders involved. It also addresses the priorities for both financial and non-financial aspects related to AI implementation.

AI Transformation necessitates a complete overhaul of companies' workforce systems, procedures, and job requirements, integrating technology, processes, and individuals seamlessly. It is evident that organizational change becomes imperative for a successful AI transformation.

The integration of robots, virtual agents, and AI technologies allows companies to replace more expensive human resources in service delivery and optimize logistic streams, thereby reducing supply chain costs. These new digital technologies significantly impact the company's cost structure. Internally, businesses must establish agile systems with reduced hierarchical levels, leaner business processes, and create new employee roles focused on innovation. The consultant's role is to redesign these aspects to ensure a smooth and effective AI transformation.

3. Apply

The reality is that there is a significant shortage of skilled workforce equipped with the knowledge and expertise in the right AI technologies. In the AI age, many practitioners lack the necessary skills to thrive, and this is a prevalent challenge worldwide.

Despite the influx of digital natives, young millennials, and Generation Z professionals and entrepreneurs, there remains a considerable gap in their AI literacy, skills, and mindset. The need to bridge this gap is evident.

To address this issue and enhance awareness of emerging technology and AI intelligence, which includes social, emotional, and cognitive skills essential to navigate the challenges of the AI world, it is essential for top management and organizational staff members to participate in AI Transformation Development Programs. These programs, facilitated by top-to-bottom consultants, play a crucial role in empowering individuals at all levels to embrace AI technology effectively and position themselves for success in the rapidly evolving AI-driven landscape.

The successful implementation of AI transformation relies heavily on Change Management methodologies. There is a heavy failure rate of AI transformation in organizations, often attributed to insufficient change management practices, particularly in addressing the human aspect of change. It is crucial to recognize that effectively introducing AI transformation entails managing organizational change and gathering support from employees for embracing new changes.

Leading change management involves having the right individuals with the appropriate mindset and expertise to back up AI's Mission, Vision, and Strategy. This becomes particularly crucial when facing skepticism about cost or coordination issues. Rushing into a quick implementation without proper change management may not yield the full benefits of the investment.

When selecting the most suitable change model, a disciplined approach is essential, starting with a clear understanding of the organization's specific change requirements. In many cases, AI transformation consultants can effectively utilize Lewin's Change Management Model (Unfreeze-Change-Refreeze). The "Unfreeze" process can intelligently begin from the "Road" phase, transitioning to the "Change" and "Refreeze" phases during the "Apply" step. Lewin's change model offers a high-level approach to mitigate organizational disruption during significant transformations, facilitating a smooth transition towards a digital-first company strategy.

4. Ascertain

In the Ascertain stage of the AI Transformation Leadership Consulting Process, the focus shifts to evaluating the performance and impact of the implemented AI solution. Consultants conduct a thorough analysis of key performance indicators and gather valuable user feedback to assess how well the AI implementation has achieved its intended objectives. This evaluation allows organizations to measure the return on investment (ROI) and determine the tangible benefits derived from the AI transformation.

By scrutinizing the data and feedback, organizations gain valuable insights into the effectiveness of the AI solution in addressing their specific business needs. It also provides an opportunity to identify any areas that may require further improvement or optimization. This data-driven approach helps in making informed decisions, shaping future strategies, and ensuring that the AI transformation continues to drive value and success for the organization in the dynamic and ever-evolving business landscape.

5. Adjustment

In the Adjustment stage of the AI Transformation Leadership Consulting Process, the primary emphasis is on continuous improvement and adaptation. AI transformation leadership consultants work closely with the organization to refine and enhance the AI solution based on the feedback and insights gathered during their monitoring.

This iterative process allows the organization to make necessary adjustments and optimizations to ensure that the AI implementation remains aligned with the evolving needs of the business. By actively seeking feedback from users and analyzing performance metrics, organizations can identify areas that require fine-tuning and improvement.

Adjustment involves making incremental changes to the AI solution, incorporating lessons learned from the initial implementation. It also allows the organization to capitalize on emerging opportunities and address any challenges or shortcomings that may arise over time.

By embracing the spirit of continuous improvement, organizations can ensure that their AI implementation remains efficient, effective, and capable of delivering sustained value in the long run. The iterative nature of the Adjustment stage enables organizations to stay agile and responsive to changing market dynamics and technological advancements, ultimately driving ongoing success in the AI-driven landscape.

Framework

In order to experience an effective AI transformation, organizations must not only upgrade technologically resources but must also undergo a company-wide change in mindset. Thus, the 5As-based Artificial Intelligence Transformation Leadership Consulting (AITL-Consulting) framework by Farhan Murtza is an applied solution to help organizations for their impactful AI transformation.

The 5As Artificial Intelligence Transformation Leadership Framework is following;

- 1) Analysis (Study Technology, Processes & People to understand AI Transformation needs in the Business or Organization)
- 2) Architecture (Set AI Transformation Mission, Vision, Strategy, and Scope and also craft Organizational Structures, Processes, and Job Descriptions to align them with AI Technologies)
- 3) Apply (Enhance AI Technologies Knowledge and Intelligence of people in the Organization and Implement AI transformation through Change Management Process)
- 4) Ascertain (Assesses the AI solution's performance and impact, analyzing key performance indicators and user feedback)
- 5) Adjustment (Emphasizes continuous improvement and adaptation, where AITL-Consulting consultants collaborate to fine-tune the AI solution based on Ascertain stage insights)

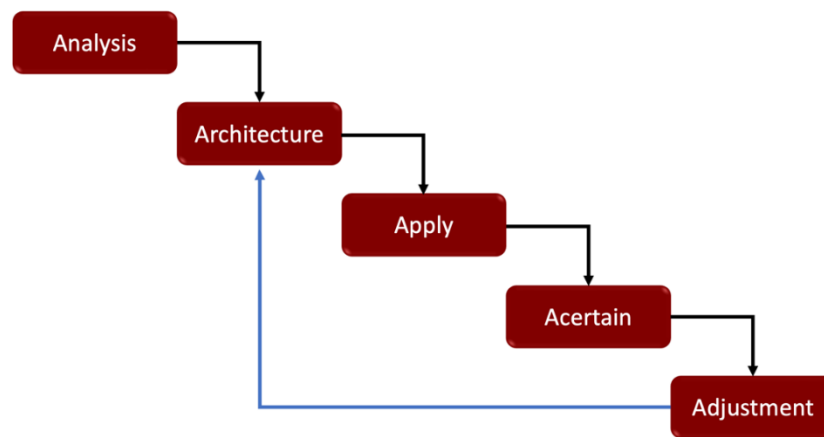


Figure 1: Artificial Intelligence Transformation Leadership Consulting (AITL - Consulting) Framework

Impact & Cessation

Implementing the Artificial Intelligence Transformation Leadership Consulting (AITL - Consulting) system is straightforward for consultants, enabling them to digitally transform companies systematically. Simultaneously, organizations can achieve successful change by carefully considering technology, industry, and people aspects.

During the AI transition, the organization may experience a sense of things falling apart, but this process is actually bringing everything together for the greater good. The transformation pushes the organization to grow, step out of its comfort zone, and ultimately embrace true greatness and appreciation.

Footnote

1. https://www3.weforum.org/docs/WEF_National_AI_Strategy.pdf
2. https://www.iceesem.com/researchpaper/Digital_Transformation_Leadership_Consulting_Framework.pdf
3. "Digital Transformation Starts with Organizational Transformation". (2017). Goglobal consulting group.
4. Donagh Mc, J. (2020). "What can digitization do for Formulated Product Innovation and Development".
5. Polymer International. doi: doi:10.1002/pi.6056
6. Eric, B. (2016). 21 Open-Source Projects for IoT. linux.com.
7. Glen, A. (2019). Successful digital transformation starts with a well-defined executable strategy for success.
8. James, B. (2019). Evolving Digital Leadership.
9. Jon, E. (2013). The rise of additive manufacturing. Wikipedia.
10. Jorge, D. C. (2020). 8 Ways to Achieve Augmented Leadership in the Digital Age. Globis Insights.
11. Kagermann, W., Helbig. (2013). Recommendations for implementing the strategic initiative Industrie 4.0.
12. 84.
13. Koval, R. (2020). Augmented Reality for Business: Benefits and Applications. leadership, c. f. c. (2020).
14. Leading Digital Transformation. Lee, C. (2019). Change management will make or break key technology rollouts. Red Hat.
15. lewin. (2020). Lewin's Change Management Model. emerald works limited.
16. McKeown Niall, D. M. (2017). The Seven Principles of Digital Business Strategy: Business Expert Press.
17. Mike, M. (2019). what is industry 4.0 everything you need to know. Tech Radar.
18. Press, A. (2019). 5 Examples of How 3D Printing Is Creating New Business Models. AMFG. Research, G.
19. (2019). Leverage Augmented Intelligence to Win with AI.
20. Rouse, M. (2019). internet of things (IoT). Wikipedia.
21. Schueffel, P. (2017). The Concise Fintech Compendium. School of Management Fribourg/Switzerland.

- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M.
18. (2019). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research. doi:<https://doi.org/10.1016/j.jbusres.2019.09.022>
19. Wikipedia. (2020). Robotics.