AI-LED TRANSFORMATION REQUIRES BIMODAL APPROACH FOR INNOVATION AT SPEED AND SCALE

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The rapid adoption of generative AI (GenAI) in enterprises is driving a technological revolution unlike any we've witnessed before. However, despite the swift pace of innovation, approximately 90% of GenAI proof-of-concept (POC) projects fail to transition into production. This high failure rate stems from a variety of challenges, including change management difficulties, unforeseen risks, ROI uncertainties, data quality issues, and misalignment with business needs.

To overcome these obstacles and improve the success rate of AI initiatives, Infosys advocates a powerful bimodal approach: the AI Foundry and AI Factory (see Figure 1). This strategy tackles both innovation and productization issues, enabling organizations to harness AI's potential while mitigating associated risks.
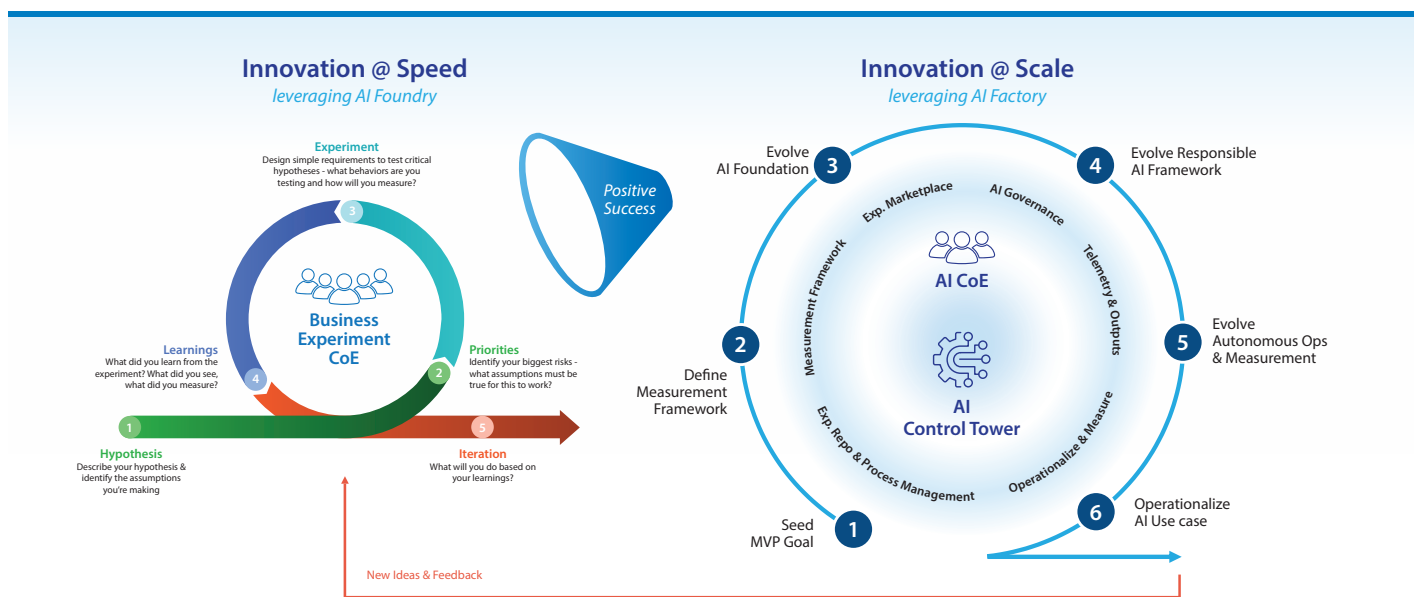

Figure 1: Innovating at Speed and Scale

The AI Foundry: Rapid Experimentation and Innovation

The AI Foundry serves as an experimental laboratory where technologists and innovators can:

- Explore cutting-edge AI technologies
- Develop novel enterprise patterns
- Investigate unconventional use cases

The focus here is on rapid iteration and value demonstration rather than meticulous refinement. This approach to rapid prototyping and experimentation is crucial to push the boundaries of technological possibilities and maintain a competitive edge.

The AI Factory: Scaling and Engineering

The AI Factory, on the other hand, focuses on turning promising AI innovations into robust, scalable, and production-ready solutions. Its key responsibilities include:

- Rigorous testing and validation of AI models
- Ensuring compliance with regulatory and ethical standards
- Optimizing AI solutions for performance and scalability
- Integrating AI capabilities into existing enterprise systems

The AI Factory ensures that only thoroughly vetted and reliable AI solutions make it into production, mitigating risks associated with AI deployment. Operationalizing the AI Factory requires two key components:

AI CoE

The AI center of excellence (CoE) serves as the central hub for AI expertise within the organization, responsible for:

- Setting the overall AI vision and strategy
- Developing best practices and standards
- Providing guidance and support to various teams
- Tracking progress and measuring the benefits of AI initiatives

An effective AI CoE combines expertise in Responsible AI, DevOps, MLOps, and DataOps to ensure a holistic approach to AI implementation. This multidisciplinary expertise is essential to address the complex challenges of deploying AI at scale.

AI Control Tower

The AI control tower acts as the nerve center of AI operations, providing:

- Real-time visibility across the entire AI ecosystem
- Predictive and prescriptive analytics
- Automated decision-making capabilities
- Optimization of AI models and processes

Advanced AI control towers can incorporate autonomous agents that propose solutions, identify the best options, and execute them with minimal human intervention. These intelligent agents enhance operational efficiency by automating complex decision-making processes and optimizing workflows.

Case Study

A global leader in audit consulting revolutionized its audit function by implementing an innovative AI Foundry approach through a meticulously organized hackathon. The firm's strategic foresight identified several high-potential use cases within the audit process, setting the stage for a 4-week intensive collaboration involving multiple AI vendors and in-house talent. This dynamic hackathon environment fostered rapid ideation and development, with solutions undergoing rigorous ongoing reviews. The final evaluation, based on viability, feasibility, and potential value, resulted in a carefully curated selection of use cases advancing to the AI Factory for scaling.

This accelerated innovation process not only catalyzed creative problem-solving but also unveiled crucial insights into the necessary data and AI infrastructure foundations across diverse use cases. The hackathon's condensed timeframe proved instrumental in uncovering synergies that might have remained hidden in a more traditional, iterative approach. Key outcomes included the development of a sophisticated multi-agent framework, an advanced system for Retrieval-Augmented Generation (RAG), Domain Prompt libraries, and a cutting-edge microservices framework for AIOps including autoscaling. The seamless integration of the AI Foundry and AI Factory created a powerful synergy, serving as a catalyst for a comprehensive transformation of the audit function.

This innovative approach is projected to yield annual savings of several million dollars by automating mundane tasks, allowing users to focus on delivering unprecedented value to clients through deeper insights and more comprehensive audit coverage. By harnessing these AI-driven solutions, the firm has not only fortified its market position but also driven substantial business growth. This bold initiative has cemented the company's status as a trailblazer in innovative audit practices, setting new industry standards and reinforcing its reputation as a forward-thinking leader in the field.
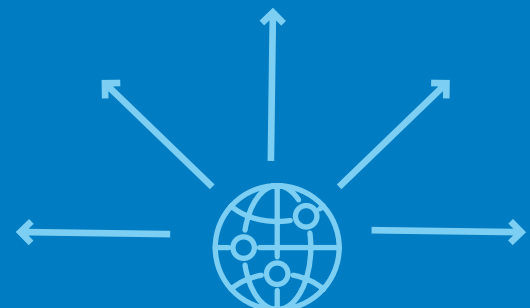
Conclusion

As we move forward in this AI-driven era, the ability to balance rapid innovation with careful productization will be a key differentiator for successful enterprises. The AI Foundry and AI Factory approach provides a structured yet flexible pathway to achieve this balance, enabling organizations to harness the full potential of AI while managing its inherent risks.

Ultimately, this bimodal strategy empowers businesses to not just adapt to the AI revolution but to lead it. By fostering a culture of continuous innovation while maintaining a focus on practical implementation, enterprises can transform AI from a speculative technology into a powerful driver of business value and competitive advantage.

As the AI landscape continues to evolve at a breakneck pace, organizations that master this bimodal approach will be best positioned to thrive in the AI-enabled future, turning today's challenges into tomorrow's opportunities.

We have curated the top 10 AI imperatives from our own learnings and experience into Infosys Topaz, our AI-first set of services, solutions and platforms using generative AI technologies. With 12,000+ AI assets, 150+ pre-trained AI models, 10+ AI platforms steered by AI-first specialists and data strategists, and a 'responsible by design' approach, Infosys Topaz helps enterprises accelerate growth, unlock efficiencies at scale and build connected ecosystems. Connect with us at infosystopaz@infosys.com.

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