

Infologic Research Overview: Manufacturing Innovation Agenda



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He has over twenty five years of experience in High-tech venture development, R&D Planning, Business Development, Product Management, and R&D efforts to develop Innovation Management methodologies & tools. Industry expertise includes Aerospace & Defense, Pharmaceuticals, and Software.

His research interests include Innovation Management, Analytics, Technology Transition, and STEM. He holds BS in Mechanical Engineering, and MS in Production Engineering.



INFOLOGIC

The logical approach to harness Innovation

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Issues Addressed

The White House report, titled: “A National Strategic Plan for Advanced Manufacturing” states that “.....The acceleration of innovation for advanced manufacturing requires bridging a number of gaps in the present U.S. innovation system, particularly the gap between research and development (R&D) activities and the deployment of technological innovations in domestic production of goods.....”.

A number of Manufacturing Enterprises fail at bringing R&D projects and emerging technologies to commercial products. This results into loss of potential markets, profitability and future viability of these enterprises. Our research indicates that these issues are attributed to (a) lack of resources to research & utilize external R&D and national manufacturing initiatives, (b) lack of strategies to create Innovation culture, and link it to the Lean initiatives; and (c) lack of processes to seek, assess and transit external R&D into commercial products.

To address these issues, based on a broader notion of Innovation, Infologic conducted research to develop an Innovation Agenda to mitigate these challenges.

Innovation Agenda

A broader notion of Innovation may be defined as “Multi-disciplinary Radical & Evolutionary R&D into materials and non-materials based Products, Processes & Execution models which incorporate Enterprise Strategy Platforms and Analytics”.

Based on the above broader notion of Innovation, Infologic has developed a Manufacturing Innovation Agenda which will help these enterprises to address the above critical issues. This agenda has three components which align with methodologies which were researched and published by Infologic at a number of R&D and Technology Management conferences. These methodologies also incorporate the following well proven practices.

- NASA and Department of Defense developed R&D and Technology Management tools, such as Manufacturing Readiness Levels (MRL), Technology Readiness Analysis (TRA), and Knowledge-based Product Lifecycle Management Process;
- Academia and Enterprise tools, such as Gartner Technology Hype Cycle, Innovation Curve, Stage-Gate process, and CMMI™ based Innovation Maturity Analysis.

Innovation Agenda Component	Goals	Relevant Infologic Methodology
1: Develop Innovation Culture	<ul style="list-style-type: none"> • Learn an emerging & broader Innovation Management model which also seeks innovations into Services, Process and Execution strategies. • Understand relationship between Innovation & Lean. 	iModel™ Innovation Management Model
2: Prepare Innovation & Technology Plan	<ul style="list-style-type: none"> • Learn to leverage Government initiatives • Scale Government, Academia and Enterprise R&D and Technology Management tools. • Utilize a four-step process to develop the plan 	TechIP™ Technology & Innovation Plan
3: Implement and Manage the Plan	<ul style="list-style-type: none"> • Learn to successfully transit R&D into Commercial Products • Conduct a CMMI™ based Innovation Maturity Analysis to manage the process. 	InnovaTE™ Innovative Technology Environment