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Conceptual paper

Innovation for creating a smart future

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ABSTRACT

Today, we live in a dynamic and turbulent global community. The wave of mega-trends, including the velocity of change in globalization and technological advances, is creating new market forces. To survive and prosper in such an environment, innovation is imperative for any organization. However, innovation is no longer just for creating value for the benefit of individuals, organizations, or societies. The ultimate purpose of innovation should be much more far-reaching, helping create a smart future where people can enjoy the best quality of life possible. Thus, innovation must search for intelligent solutions to tackle major social ills, more proactive approaches to predict the uncertain future, and pursue strategies to disrupt the barriers to the smart future. This study explores the detailed requirements of a smart future including both hardware types and soft social/cultural components.

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Innovación para crear un futuro inteligente

RESUMEN

Hoy por hoy, vivimos en una comunidad global dinámica y turbulenta. El movimiento de las megatendencias, que incluye la velocidad del cambio en la globalización y los avances tecnológicos, está creando nuevas fuerzas de mercado. Para sobrevivir y prosperar en dicho entorno, la innovación es indispensable para cualquier organización. Sin embargo, la innovación ya no únicamente sirve para crear valor para el beneficio de individuos, organizaciones o para la sociedad. El propósito final de la innovación debe ser de mayor alcance, ayudar a crear un futuro inteligente donde las personas puedan disfrutar de la mejor calidad de vida posible. En consecuencia, la innovación debe buscar soluciones astutas para hacer frente a los grandes problemas sociales, buscar enfoques más proactivos para predecir

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el futuro incierto, y aplicar estrategias para romper las barreras al futuro inteligente. Este estudio explora los requisitos detallados de un futuro inteligente, incluyendo ambos tipos de hardware y software de los componentes socio culturales.

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Introduction

Innovation has been the main task of humans throughout history (Lee, 2015). To survive and improve the quality of life, continuous innovation efforts have been imperative. All major revolutionary waves of human history - agricultural, industrial, information, and now convergence - are all about innovation for creating new and better value (Lee, Olson, & Trimi, 2012). Political leaders exhort the importance of innovation for social justice and a better quality living environment for the citizens. Global executives stress the importance of continuous innovation for new products/services and ventures for customers, yet 94 percent expressed dissatisfaction with their innovation performance (Christiansen, Hall, Dillon & Duncan, 2016). Managers of non-profit organizations pursue innovation to challenge the social ills of the economic divide, digital divide, and goal divide (Lee, 2015). The purpose of innovation is much more profound than just creating greater customer value, better competitive advantage of firms, and an environment for better quality of life. The ultimate goal of innovation should be the creation of a better future. The "small i" for innovation is for an individual, organization, society, or country. However, the "Large I" should be innovation for creating a smart future.

The benefits of innovation may accrue to individuals, groups of people, communities, industries, societies, nations, regions, and the world. What is common to all these entities is that they all pursue innovation for better preparation of the future (Canton, 2015; Drucker, 1985). However, innovation should not be for passively being future smart by preparing to meet the uncertain future by being predictive, adaptive, and agile. Instead, innovation should be for more aggressively active in creating a smart future that provides more opportunities for a better quality of life.

The term "smart" has been used widely nowadays, for example, smartphones, smart cars, smart homes, smart infrastructure, smart cities, smart countries, and the like. The term "smart" represents the concept of hope and aspiration that depends on a person's perspective. The smart state depends on the given condition, environment, culture, and the person's value system. Nevertheless, the general concept of a smart future should mean a living environment which is much better than the current state of affairs.

The smart future should be where innovation would help develop intelligent solutions to complex problems to secure a humane environment (Streitz, 2015). In such a smart future, people can more freely pursue opportunities to learn and grow, be engaged in good relationships, be happy with the community and work place, and also have a comfortable and healthy life style with adequate financial resources (Gallup-Healthways, 2015). Creating such a smart future requires much more than just smart gadgets, advanced technologies, convergence strategies, and government support. It requires a fabric of soft innovations that can nurture an aspirational future such as social justice, rule of law, transparency, accountability, cohesive collective wisdom of people, and shared visions and goals (Kramer & Pfitzer, 2016; Porter & Kramer, 2011).

In this paper, we will explore the definition of a smart future, requirements for creating an environment for the wellbeing of people, application of fast advancing science and technologies, and creative convergence strategies that support aspirational innovation efforts, ideas that can disrupt the barriers to a smart future, and the soft social requirements that are fundamental for developing shared visions for a smart future. This paper is organized as follows. In "Innovation for value creation" section, we discuss the purpose, classification, and organizational purpose of innovation. "Innovation life cycle" section presents innovation life cycle from idea generation to harvesting on the S-curve. The concept of a smart future is articulated in "What is smart future?" section, while the requirements for creating a smart future is presented in "Requirements of a smart future" section. "Innovations that disrupt barriers to the smart future" section discusses innovations that can disrupt barriers to a smart future. "Conclusion" section concludes the paper by proposing the soft social requirements for s smart future.

Innovation for value creation

Today, business executives, political leaders, educational administrators and even religious leaders all exclaim the innovation imperative. In a broad sense, innovation is synonymous with change (Tushman & O'Reilly, 1997). Change can be due to natural phenomena, the intentional design of human ingenuity, or collaborative efforts of individuals (Lee & Olson, 2010). Scientific breakthroughs, technological advances, inspiring ideas that motivate the masses, and the like are all changes that are often the outcomes of innovation. However, many innovations never see the light of the day. Many new scientific and scientific developments may contribute to the existing body of knowledge but they may not be economically feasible for actual implementation (Schumpeter, 1934).

In this paper, we define innovation as new ideas that are actually applied in fundamentally different ways to generate new and/or additional value (Lee & Olson, 2010). We further assume that innovation is for the benefit of all stakeholders, not just the idea generator or the organization. Recently, a number of countries have adopted innovation as their national agenda. For example, Singapore proclaimed "creating a smart

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