Preparing for Chance: The Coatings Industry's Path to Innovation That Wins

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"Chance favors the prepared mind."-Louis Pasteur used this phrase to describe the fact that many of the world's human-made marvels are minds possible through a combination of intellectual curiosity and timing, not by pure chance alone. Take the telegraph, for example. We may associate Samuel Morse with its invention, but the telegraph's development was enabled by a prior discovery by Danish physician Hans Christian Oersted made by "chance" – the realization that electricity and magnetism are linked.

Intrigued by the idea that they might have a potential relationship, Oersted was able to show via experimentation that electric currents can affect the movement of nearby magnetic needles. This demonstration introduced the world to electromagnetism, a force that ultimately made intercontinental communication possible through the telegraph. Oersted made a connection that others missed because his mind was prepared to discover a relationship between the two forces—the chance encounter merely revealed the specific nature of their dynamic link.

THE PREPARED PAINT INDUSTRY

Even in its most primitive forms, paint has been a staple in the world for millennia. In modern times, the paint and coatings industry has adapted to various technological advances and a list of ever-evolving societal and regulatory needs. Today, as the pace of change within the coatings industry accelerates, paint can no longer merely protect or beautify; there are growing demands for paint to go above and beyond its normal call of duty.

Like Oersted, chemists and formulators must have prepared minds as they work to develop breakthrough technologies that will meet evolving performance and functionality requirements. Today, several forces are driving a shift toward sustainable, multifunctional paint. These primarily include societal megatrends and evolving consumer preferences in the age of digital and social media.

Everything from economic development around the world, increasing urbanization, and the current geopolitical environment to a growing elderly population and millennials who rely on social media for news and purchase recommendations can affect whether a paint line or paint ingredient enjoys commercial success.

The prepared scientific mind does not solely work in the lab to identify the best great chemistry that will improve a particular paint characteristic; it also makes connections beyond the technology itself to determine how best to anticipate marketplace needs, regulatory trends, and the timing that may increase the likelihood of adoption. In other words, the coatings industry professional with a prepared mind is ready for the insight to help the right technology succeed in the right place at the right time.
**Path to Innovation**

**That Wins**

Reflecting on the factors that helped catalyze their growth, the teams believe that key developments of the past decade in innovation and manufacturing technologies have been crucial in propelling growth.

**The Future is Now**

While economics, with some additional influences of local market dynamics, play a role, today’s market is driven by a range of factors that include general economic conditions, technological advancements, and consumer behavior. The race is on for companies to innovate and adapt, ensuring they remain competitive in this fast-paced environment.

**Big Cities, Diverse Opportunities**

World population growth, and accompanying the varied rates of urbanization and economic development, are key drivers of change in the paints and coatings industry. The most recent data from the United Nations (as of 2015) project a world population of around 9.7 billion people, with half of them living in cities. By 2030, the world population is expected to exceed 8 billion, with almost 60% of these people living in urban areas. Importantly, 95% of the world’s growth is expected to take place in the developing world.

The market opportunities for paints and coatings in these developing nations can differ from those found in the developed world. For example, in many African countries simply receiving a bike can change a person’s life, paint is not only a decorative and protective function but also a means for meeting basic human needs. Paint’s fundamental function of protection and preservation remains true in all circumstances. For example, community-based projects that provide free or low-cost paint distributions to communities can contribute significantly to improving living conditions and enhancing overall well-being.

**The desire to integrate data and technology into the way cities are managed and experienced offers boundless opportunities for coatings that already play an integral role in protecting infrastructure**.

Shifting Consumer Preferences Are Signpost to Market Demand

Across the globe, the way end users consume paint is changing as well. Desire for convenience, customization, and sustainability has driven consumers towards more sustainable and innovative products. The rise of digital and social media that influences the majority of consumers’ pathways to purchase, especially tech-savvy millennials. First, professional painters are being called upon in higher numbers, both retrofitting buildings and millennials who have yet to transition to home ownership. Increasingly living in multi-residential housing rental units that are painted by professional painters in line with building owners’ standards. This means the paint needs to appeal to contractors’ preferences, with qualities including cost-effectiveness, longlasting aesthetics, and ease-of-application requirements. Consequently, consumer preferences are changing too. With the growing influence consumers have over sales, and the access to information, these are key drivers in today’s market.

**Making the Connections That Lead to Failure**

The key remains mindfulness and a prepared mind can help paints and coatings industries anticipate future market needs and demands, pre-empt regulatory changes, and stay ahead of the curve in a fast-moving and well-connected world. There are plethora of opportunities for the paints and coatings industry to continue to innovate. The industry must keep its collective eyes, ears, and minds open to new ideas, and preparation. After all, the world will certainly want to hear the news via the telegraph’s myriad surrogates.

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HISTORY REPEATING ITSELF
Reflecting on the factors that helped drive their growth, manufacturers in the personal care industry often find themselves back at the intersection of technology, innovation, and market disruption. The success of the past is often fueled by the anticipation of technological advancements and the need for new solutions to old problems. In this dynamic landscape, technology-driven solutions can provide a competitive edge, allowing companies to stay ahead of the curve.

Path to Innovation
That Wins
Across the globe, the路径 to innovation is changing as well. Desire for convenience, cost efficiency, and sustainability can contribute to a growing middle class, an aging population that prefers to live in smaller spaces, and a more sustainable mindset where people often move in and out of apartments. As a result, new opportunities exist in markets like decorative paint and construction paint—markets that overall are projected to reach $30 billion by 2026. Increasingly sophisticated middle classes also demand differentiated paint characteristics. In dense cities, this equates to opportunities surrounding paint functionality to combat air and other pollution that residents experience. In China, for example, people will typically paint their apartments no more than once a year. The paint must perform outdoors and on home and while leaving the paint dries; this is an unnecessary burden that they would prefer to avoid. Paint's potential to actively improve indoor air quality (IAQ), reduce formaldehyde, which is harmful to human health, is desirable, as are paint formulations that can improve the quality of life through improved durability, and very low emissions.

Opportunities for change are everywhere, and the ability to harness innovation and technology to create new possibilities is crucial. In the coming years, we can expect to see significant advancements in both the environmental and economic aspects of the industry. As the focus shifts towards sustainability and cost efficiency, the demand for environmentally friendly and economical solutions will continue to grow. This presents a unique opportunity for companies to differentiate themselves in the market and capture a larger share of the growing customer base. The key to success will be the ability to innovate and adapt to the changing market conditions, while also ensuring that the products are accessible and affordable to a wide range of consumers.

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