

## **Product Differentiation Excellence Award Computed Radiography Inspection Systems Global, 2012**

### **Frost & Sullivan's Global Research Platform**

Frost & Sullivan is in its 50th year in business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The company's research philosophy originates with the CEO's 360-Degree Perspective™, which serves as the foundation of its TEAM Research™ methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2012 Global Product Differentiation Excellence Award in the Computed Radiography Inspection Systems Market to Carestream NDT.

### **Significance of the Product Differentiation Excellence Award**

#### **Key Industry Challenges Addressed by Superior Product Positioning**

Although digital radiography was introduced to the NDT industry several years ago, acceptance has remained relatively slow. The popularity and penetration of traditional film radiography, coupled with the reluctance of certain conservative end-user industries such as aerospace, power generation, and oil and gas to embrace digital radiography, resulted in sluggish market adoption. The failure of early digital radiography systems has also allayed the fears of customers' reliability-centered concerns, augmenting the reluctance to change.

In such a market scenario, Frost & Sullivan notes that it is a challenge to develop products that address core customer concerns and are widely accepted across end user applications. The market participant that is able to illustrate excellent product differentiation strategies and develop products that are designed to meet the stringent requirements of the NDT industry will overcome the challenge with relative ease.

#### **Key Benchmarking Criteria for Product Differentiation Excellence Award**

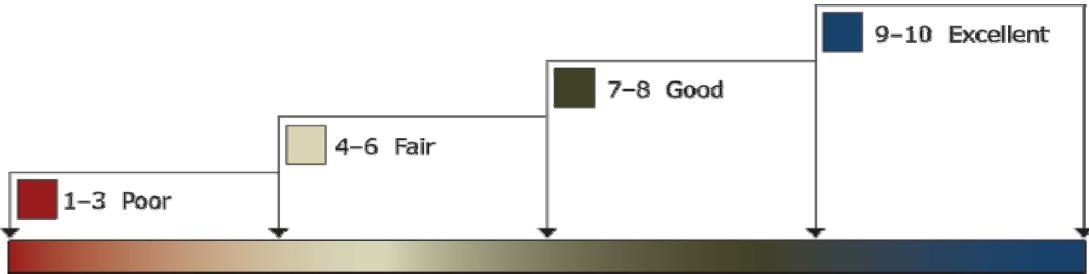
For the Product Differentiation Excellence Award, the following criteria were used to benchmark Carestream NDT's performance against key competitors:

- **Unique Features/Functionality**
- **Quality/Complexity**
- **Customization**
- **Matched to Target Markets Needs**
- **Brand Perception of the Uniqueness of the Product**

**Decision Support Matrix and Measurement Criteria**

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Matrix (DSM). The DSM is an analytical tool that compares companies’ performance relative to each other with an integration of quantitative and qualitative metrics. The DSM features criteria unique to each Award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. Fundamentally, each DSM is distinct for each market and Award category. The DSM allows our research and consulting teams to objectively analyze each company’s performance on each criterion relative to its top competitors and assign performance ratings on that basis. The DSM follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are shown in Chart2.

**Chart2: Performance-Based Ratings for Decision Support Matrix**



This exercise encompasses all criteria, leading to a weighted average ranking of each company. Researchers can then easily identify the company with the highest ranking. As a final step, the research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

**Chart3: Frost & Sullivan’s 10-Step Process for Identifying Award Recipients**



## Best Practice Award Analysis for Carestream NDT

The Decision Support Matrix, shown in Chart 4, illustrates the relative importance of each criterion for the Product Differentiation Excellence Award and the ratings for each company under evaluation. To remain unbiased while also protecting the interests of the other organizations reviewed, we have chosen to refer to the other key players as Competitor 1 and Competitor 2.

**Chart4: Decision Support Matrix for Product Differentiation Excellence Award**

<i>Measurement of 1–10 (1 = lowest; 10 = highest)</i>	<b>Award Criteria</b>					
	Unique Features/Functionality	Quality/Complexity	Customization	Matched to Target Markets Needs	Unique Name/Brand Recognition	<b>Weighted Rating</b>
<b>Relative Weight (%)</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>100%</b>
<b>Carestream NDT</b>	<b>9</b>	<b>9</b>	<b>8.5</b>	<b>9.5</b>	<b>9</b>	<b>9</b>
Competitor 1	8.5	8.5	8.5	8	9	8.5
Competitor 2	8	8.5	8	7.5	9	8.2

### Criterion 1: Unique Features/Functionality

Since its introduction in mid-2009, the Carestream Industrex HPX-1 CR scanner has been a benchmark in the CR inspection systems market for its functionality and reliability. Packaged with features that are specific to the requirements of the NDT industry, the product has witnessed rapid adoption. The features that stand out in HPX-1 include the flexibility to operate with rigid cassettes or flexible imaging plates, widest range of imaging plates in the industry, highly rugged construction specific for challenging NDT environments, halogen “smart” erase, and Industrex® advanced viewing software.

Compared with its competitors, HPX-1 can run imaging plates ranging from 70 mm to 14-inch in width and up to 60 inches in length. Additionally, the HPX-1 scanner is capable of scanning not only standard long and short plates but also custom small and irregular sized shapes used in specialty imaging giving customers a very high level of flexibility and efficiency. The HPX-1 scanner’s wide operating range provides the maximum material thickness coverage in a single shot. This is useful in decreasing the number of radiographic shots that are required to cover a given area improving productivity and efficiency.

The halogen “smart” erase feature enables fast and effective high intensity erase calculated for each scan based on the specific exposure the imaging plate received. The Industrex v4.1 advanced digital viewing software also combines high functionality with powerful tools and the simplest user interface. The software is packaged with several high-end features such as EDGE® automatic image enhancement filters, pipe wall thickness tool, multiple measurement functions, networking capability, 2 or 4 split-screen capability to compare multiple images, and automatic file control tracking.

In addition, Frost & Sullivan is of the opinion that Carestream’s Industrex HPX-1 is an instant success because it is the only product on the market that has been developed specifically for NDT applications while taking into account the industry’s specific needs.

### **Criterion 2: Quality/Complexity**

Carestream as a company is synonymous with innovative high-quality products. In the healthcare sector, Carestream Health has received a number of Frost & Sullivan accolades for superior quality and the reliability of its products. This tradition has been carried forward by its NDT division with the Industrex HPX-1 CR scanner. Built specifically for NDT applications, the HPX-1 is extremely rugged and has been tested extensively to ensure that it can survive the harshest of environments during field inspection. The HPX-1 has passed extensive vibration, drop, and dust tests, which ensures accuracy and effective functioning even in the toughest inspection environments.

Since its launch in 2009, Carestream has not received any complaints related to the efficiency of its equipment. In addition, the product is recognized for its ruggedness and long service life. The HPX-1 also stands out for its reliability, primarily because competitor products have not been customized to meet the harsh environments of the NDT industry and are merely adaptations of CR scanners used in healthcare applications.

### **Criterion 3: Customization**

Over the past decade, Carestream has acquired an image of a customer-driven company. The products developed by the company are typically customized to the customer’s needs. The HPX-1 CR scanner is a perfect example of this initiative. Carestream went the extra mile performing many NDT on-site visits by the design team to incorporate customer suggestions and requirements to develop this product, making it the only product available in the market specifically designed for NDT applications.

Among others, the most important customized feature Carestream has provided is the multiple internal fans and filters to keep dust, debris, and unfiltered air out of the system. The scanner also sits on vibration damping feet to isolate it from the industrial environment.

**Criterion 4: Matched to Target Markets Needs**

The CR inspection systems market is characterized by competitors that are owned by a healthcare parent company. As a result, most products infused in this market are an adaptation of the CR inspection system used in healthcare applications. There are several key shortcomings to using a healthcare CR scanner for NDT applications.

The most important factor is that equipment used for NDT is subjected to extremely harsh inspection environments. Therefore, the equipment needs to be rugged enough to endure the tough conditions. Because the CR scanners provided by competitors are generally the same as those used in healthcare applications, they face reliability issues.

On the other hand, HPX-1 has been built for use in NDT applications as the key design criterion. Carestream also visited a number of customer sites collecting important information on the needs and wants of the technicians operating NDT equipment in industrial applications. The company has incorporated more than 300 customer ideas into the HPX-1 CR scanner, a testament to the company's customer-centric approach to product development.

**Criterion 5: Brand Perception of the Uniqueness of the Product**

Frost & Sullivan independent research across market participants concludes that Carestream Health is a highly acclaimed brand name in the healthcare market. Recognized for its ability to develop best-in-class medical devices, the company has set several benchmarks in the healthcare industry. The NDT division of the company has, for the past decade, created a similar identity of delivering high quality products. With HPX-1 specifically built around the needs and requirements of NDT oriented applications, Carestream has created an image of a company that is deeply involved in solving the industrial inspection needs of its customers.

In 2007, Carestream announced the takeover of Eastman Kodak Company's former NDT division. This acquisition brought with it over 100 years of imaging experience and more than 75 years of knowledge in the NDT industry.

**Conclusion**

In 2009, the Industrex HPX-1 was the first scanner to be launched in the CR inspection systems market in a decade. Customized to meet the stringent requirements of NDT applications, the product attracted a strong response from customers for its functionality and reliability. In a market dominated by medical scanners adapted to perform in NDT applications, the HPX-1 CR scanner emphasized the importance of accurate measurements in industrial environments and the differences of a product made specifically for the rigors

of the NDT industry. Carestream NDT has displayed true product differentiation excellence and is recognized by Frost & Sullivan for its achievements with the 2012 Global Product Differentiation Excellence Award.

## The CEO360-Degree Perspective™- Visionary Platform for Growth Strategies

The CEO 360-Degree Perspective™ model provides a clear illustration of the complex business universe in which CEOs and their management teams live today. It represents the foundation of Frost & Sullivan's global research organization and provides the basis on which companies can gain a visionary and strategic understanding of the market. The CEO 360-Degree Perspective™ is also a “must-have” requirement for the identification and analysis of best-practice performance by industry leaders.

The CEO 360-Degree Perspective™ model enables our clients to gain a comprehensive, action-oriented understanding of market evolution and its implications for their companies' growth strategies. As illustrated in Chart 5 below, the following six-step process outlines how our researchers and consultants embed the CEO 360-Degree Perspective™ into their analyses and recommendations.

**Chart5: CEO's 360-Degree Perspective™ Model**





## Critical Importance of TEAM Research

Frost & Sullivan's TEAM Research methodology represents the analytical rigor of our research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all seven of Frost & Sullivan's research methodologies. Our experience has shown over the years that companies too often make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Frost & Sullivan contends that successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. In that vein, the letters T, E, A and M reflect our core technical, economic, applied (financial and best practices) and market analyses. The integration of these research disciplines into the TEAM Research methodology provides an evaluation platform for benchmarking industry players and for creating high-potential growth strategies for our clients.

**Chart 6: Benchmarking Performance with TEAM Research**



## About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.