

## **Technology Innovation of the Year Award Mobile Cardiac SPECT North America, 2011**

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

Frost & Sullivan is entering its 50<sup>th</sup> 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 in turn 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 2011 North American Technology Innovation of the Year Award in the Mobile Cardiac SPECT market to GVI Medical Devices.

### **Significance of the Technology Innovation of the Year Award**

#### **Key Industry Challenges Addressed by Technology Innovation**

With changing reimbursement dynamics, the nuclear cardiology market is looking at methods to utilize equipment and personnel in a more economically productive way. To sustain such economically challenging situations, end-users are demanding diagnostic imaging solutions that not only deliver uncompromised imaging capability but can also be cost effective. There are several thousand nuclear cardiology physician offices in both urban and rural locations in the U.S. that would benefit a larger patient population. Frost & Sullivan notes, however, that the low study volume does not justify the cost /expense of dedicating equipment and personnel to individual locations. Hence, mobile SPECT imaging systems are emerging as a cost effective solution to meet the daily imaging requirements of these lower volume locations. In response to this pressing industry need, GVI Medical Devices has recently launched the mSPECT-- a mobile/portable dedicated nuclear cardiology SPECT device.

Based on a shared asset model, smaller clinics can now provide undeterred service to their patients without the straining costs associated with owning expensive devices.

#### **Impact of Technology Innovation of the Year Award on Key Stakeholders**

The Technology Innovation of the Year Award is a prestigious recognition of GVI Medical Devices' accomplishments in the mobile cardiac SPECT market. An unbiased, 3<sup>rd</sup> party recognition can provide a profound impact in enhancing the brand value and thereby accelerating GVI's growth. As captured in Chart 1 below, by researching, ranking, and recognizing those who deliver excellence and best practices in their respective endeavors, Frost & Sullivan hopes to inspire, influence, and impact three specific constituencies:

- **Investors**

Investors and shareholders always welcome unbiased and impartial third party recognition. Similarly, prospective investors and shareholders are drawn to companies with a well-established reputation for excellence. Unbiased validation is the best and most credible way to showcase an organization worthy of investment.

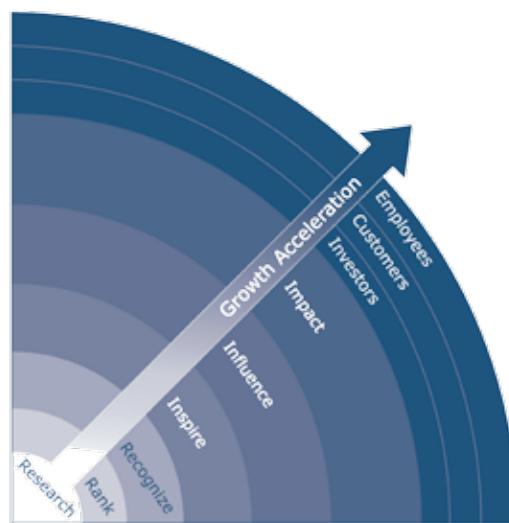
- **Customers**

3rd party industry recognition has been proven to be the most effective way to assure customers that they are partnering with an organization that is leading in its field.

- **Employees**

This Award represents the creativity and dedication of GVI Medical Devices' executive team and employees. Such public recognition can boost morale and inspire these stakeholders to continue the best-in-class pursuit of a strong competitive position for the company.

**Chart 1: Best Practices Leverage for Growth Acceleration**



### Key Benchmarking Criteria for Technology Innovation of the Year Award

For the Technology Innovation of the Year Award, the following criteria were used to benchmark GVI Medical's performance against key competitors:

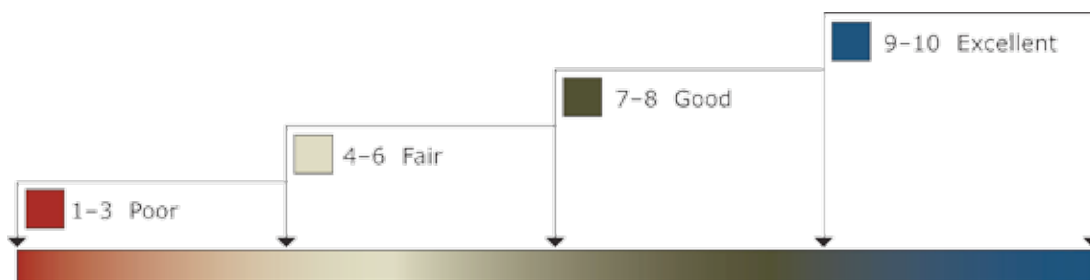
- Uniqueness of Technology
- Impact on New Products/Applications
- Impact on Functionality
- Impact on Customer Value

- Relevance of Innovation to Industry

## 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 Chart 2.

**Chart 2: 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.

**Chart 3: Frost & Sullivan’s 10 Step Process for Identifying Award Recipients**



**Best Practice Award Analysis for GVI Medical Devices**

The Decision Support Matrix, shown in Chart 4, illustrates the relative importance of each criterion for the Technology Innovation of the Year 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.

**Chart 4: Decision Support Matrix for Technology Innovation of the Year Award**

<i>Measurement of 1-10 (1 = lowest; 10 = highest)</i>	<b>Award Criteria</b>					<b>Weighted Rating</b>
	Uniqueness of Technology	Impact on New Products/Applications	Impact on Functionality	Impact on Customer value	Relevance of Innovation to Industry	
<b>Relative Weight (%)</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>100%</b>
GVI Medical Devices	9.5	9	9	8	8	8.7
Competitor 1	9	7.5	8	7	7.5	7.8
Competitor 2	9	7	8	6	8	7.6

**Criterion 1: Uniqueness of Technology**

mSPECT is truly unique; not only is it a portable device, but also a system dedicated purely for nuclear cardiology procedures. It provides the complete clinical capability to diagnose coronary artery disease and can be used in multiple locations as a single system. It is an integrated solution which allows image acquisition, processing, and review in a self-contained mobile configuration. Other unique features of mPSECT include its Sodium-Iodide crystal based medium field of view detectors, which utilize full digital electronics and signal processing to provide uncompromised SPECT performance. Furthermore, the system allows maximum sensitivity and resolution for cardiac imaging and maintains the cardiac volume within the field of view.

The system also uses standard wireless networking and a proprietary software application - called WebReview - which allows a physician to immediately & remotely review clinical results from any location without having to install additional software and without interrupting the normal work flow. In summary, Frost & Sullivan's analysis of the competitive landscape reveals that mSPECT differs from other products by allowing a larger field of view which ideally suits the imaging of obese patients, by being portable and flexible, and also by allowing the remote viewing/reading of acquired patient studies.

**Criterion 2: Impact on New Products/Applications**

As a dedicated cardiac SPECT device, mSPECT is ideally suited for diagnosis of coronary artery disease. Also, by adopting a mobile device like mSPECT, private practice cardiology offices with multiple locations can now offer extended service to patients; hospitals interested in providing outreach service and private mobile operators servicing multiple physician offices can more easily accomplish their tasks. In addition, the system could also be chosen by hospitals as an interim solution to meet their increasing nuclear cardiology demands and also at the time of product replacement. Apart from this, the system design is also standardized with high scope for new clinical indications in cardiology SPECT imaging via software upgrades. Potential future applications are also being considered for emergency room imaging for patients with chest pain in order to assist in determining if the chest pain is due to coronary artery disease or myocardial infarction. Furthermore, the base system technology could also readily adapt for neuro SPECT imaging (brain studies) as well, should the market segment involve a routine diagnostic testing.

**Criterion 3: Impact on Functionality**

Today, end-users obviously prefer to perform diagnostic procedures at their place of practice but at a lower price point. With the advent of mSPECT, these needs could be met, and the cost of the capital expenditure and ongoing expenses could be spread across multiple users; this has the potential to eventually lower the overall expense to

the end-user and patient alike.

Also, by investing in a shared-asset model like mSPECT, clinics can now look for a 100% utilization rate - as opposed to only 60-90% utilization - when they have a permanently installed device. In addition, GVI Medical Devices also has future plans for R&D based product evolution, which includes advanced reconstruction software. Achieving this would help improve clinical flexibility to perform faster studies and also require only half the standard radiopharmaceutical dose, which in turn will reduce patient radiation exposure. GVI also envisions that future product upgrades rolled out from the company will contain clinical application functionality the market needs for new indications in cardiac disease diagnosis.

#### **Criterion 4: Impact on Customer Value**

The economics of a shared asset model for outpatient imaging using a mobile solution are well established. mSPECT could therefore emerge as the ideal solution for lower patient volume satellite office locations and referring physician offices by using a single system, nuclear technologist and a support nurse. GVI, which is planning to start commercial shipments of the mSPECT system by Q1 2011 opines that the net improvement in ROI for imaging service providers adopting the device could be anywhere from 10% to 50%, depending on the specific patient population.

mSPECT, in addition to providing the basic inherent benefits of a mobile device, also improves clinical efficiency. In addition, it allows remote image viewing and analysis for physicians, so that customers who prefer the services of expert nuclear cardiologists can benefit from secure, instant-online consultations. mSPECT allows imaging to be performed in virtually any sized room in the office, and the room is only required when the system is onsite performing patients studies. Finally, the system's flexibility of being used in multiple locations in a cost effective manner therefore expands market access.

#### **Criterion 5: Relevance of Innovation to the Industry**

With the aging population in the US and also the rest of the world, and the increasing incidence of cardiovascular diseases, the procedure volume of diagnostic cardiology imaging is expected to increase at a steady pace for the foreseeable future. Moreover, there is a growing interest in nuclear cardiology imaging at a global level and also an emerging major market opportunity in developing world markets such as China, India, Russia and Brazil. To suit the buyer needs of both the developed and developing worlds, low cost solutions are significant buying criteria, and the mSPECT is well positioned to be nicely received as a practical system, both easy to install and service. Based on the company's best practices approach to the mobile cardiac SPECT arena, GVI Medical Devices is the recipient of the 2011 Frost & Sullivan Technology Innovation of the Year Award.

## The CEO 360 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 360 degree perspective is also a “must-have” requirement for the identification and analysis of best-practice performance by industry leaders.

The 360 degree 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 Figure 5 below, the following six-step process outlines how our researchers and consultants embed the 360 degree perspective into their analyses and recommendations:

**Chart 5: 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 7 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 the 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 almost 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.