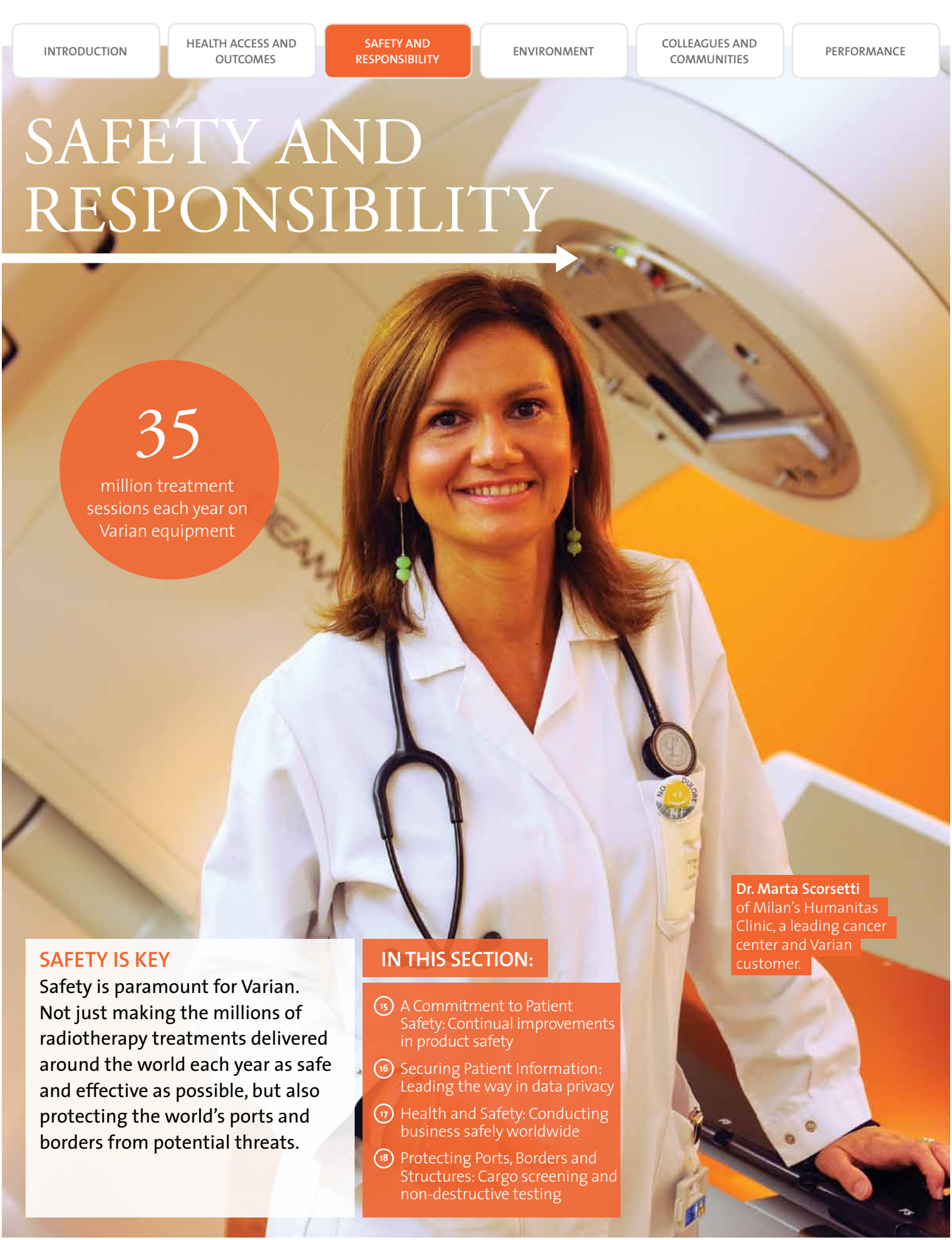
SAFETY AND RESPONSIBILITY

35
million treatment sessions each year on Varian equipment



Dr. Marta Scorsetti of Milan's Humanitas Clinic, a leading cancer center and Varian customer.

SAFETY IS KEY

Safety is paramount for Varian. Not just making the millions of radiotherapy treatments delivered around the world each year as safe and effective as possible, but also protecting the world's ports and borders from potential threats.

IN THIS SECTION:

TrueBeam STx with patient.

A COMMITMENT TO PATIENT SAFETY

Varian's medical imaging and cancer treatment devices are intended to help patients. Patient safety is therefore a primary consideration in everything we do, from product design to post-market surveillance.

Like all medical device manufacturers, Varian operates in a highly regulated sphere, and works diligently to comply with the requirements of the U.S. Food and Drug Administration (FDA), the European regulatory authorities, and similar bodies in Canada, China, Japan, Latin America, and throughout the world, which set stringent standards for protecting patient safety. Throughout the design and development process, Varian teams conduct detailed risk analyses, as well as verification and validation tests, to demonstrate that products are safe and effective for use.

As a consequence, millions of radiotherapy treatments are delivered safely each year at treatment centers around the world. The American Society for Radiation Oncology (ASTRO) has estimated that radiotherapy treatments are delivered safely and accurately more than 99% of the time.

Despite the company's best efforts, however, on rare occasions, radiotherapy treatment mishaps do occur. When such an incident occurs, Varian follows a careful process for alerting regulatory authorities, investigating the situation, determining the root cause, alerting customers to prevent similar incidents from happening elsewhere, and taking corrective action, including product recalls when appropriate. Finally, we take any lessons learned and use them to resolve any issues with additional safeguards. This approach to patient safety helps us improve on our product quality.

In addition to reactive action in response to complaints, Varian is proactive about continual improvement in product safety. In a process we call post-market surveillance, Varian monitors diverse information sources to collect information. Product specialists observe and interview early adopters of new products to identify any issues that could affect patient safety or clinical efficacy. They survey customers and monitor professional communication channels such as blogs and list servers addressing the medical physics and radiation therapy professional communities. They vigorously analyze all product improvement requests, complaints, and help desk calls to spot trends that might reveal product issues that need to be addressed. The information generated from postmarket surveillance becomes the basis for designing product improvements. For example, such analyses led to system enhancements such as:

- A treatment management system that performs data checks to verify that all critical pieces of data are present before a treatment is allowed to proceed;
- Additional safety features that ensure key components of the system are operating correctly;
- Dose monitoring systems that monitor the intensity and uniformity of the treatment beam;
- Interlocks that stop a treatment if any beam parameter falls outside predetermined limits.

These are just a few of the numerous safety features in treatment delivery systems from Varian.

TRAINING AND EDUCATION

In addition to taking a constant-improvement approach to the company's products, Varian is fully committed to providing clinicians with comprehensive training programs in the safe and effective use of Varian technology. The company takes a "blended learning" approach, utilizing classroom training, on-site clinical support, and remote learning options including webinars with clinical experts from around the world. Varian operates the largest private network of radiation oncology training centers in the world, with sites in Las Vegas, Nevada; Beijing, China; Zug, Switzerland; Buc, France; Mumbai, India; and as of 2010; Tokyo, Japan.

Varian's training, education, and help desk teams comprise more than 210 clinically experienced personnel – people who speak more than 15 languages – to facilitate the transfer of knowledge for safe and effective use of Varian technology.

DATA PRIVACY AND SECURING PATIENT INFORMATION

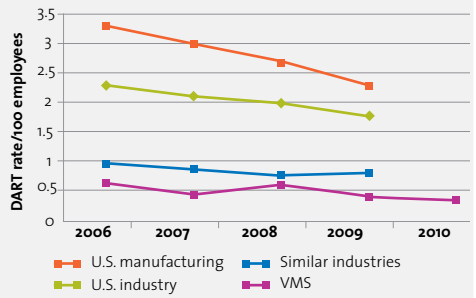
For Varian, protecting patients includes protecting patient privacy and securing the electronic data that we receive as a result of their treatment on our machines. Varian's software products meet all of the stringent data privacy standards required by regulatory bodies around the world, including the U.S.'s Health Insurance Portability and Accountability Act (HIPAA), the European Union's Data Privacy laws, the U.S. Government's Safe Harbor framework and local information security and privacy laws as required by the countries in which we operate.

Varian ensures privacy and security of patient information by enforcing the following:

- Varian has adopted a comprehensive Privacy and Security Policy that governs how employees obtain, utilize, store, transmit, and protect confidential patient health information. This policy and associated operational procedures guide employees in ensuring adequate control and protection of all customer data entrusted to the company in the course of conducting business with clients.
- All Varian employees receive training in data privacy and information security. Employees who may come into contact with patient health information while performing customer service and support functions receive additional training. They also adhere to special procedures regarding Varian's Privacy and Security Policy and the importance of protecting patient health information.
- Customers' sensitive information is tracked throughout its lifecycle, up to the point where it is no longer needed and is removed or destroyed.
- Employees must report immediately the loss of technology (phones, laptops, data drives) that might contain any sensitive data, using a special "information incident" link on the Varian intranet. Such incidents are investigated to ensure Varian meets notification and remediation obligations to customers as required.
- Business units are audited for compliance, and any non-compliance noted is discussed and managed by the data privacy and information security executive steering committee to ensure adequate mitigation.
- Varian's approach to privacy and security controls is global, and policies are translated into all major languages (French, Spanish, German, Chinese, Italian and Japanese) in the countries where Varian operates. Training is administered locally to ensure effectiveness and compliance.

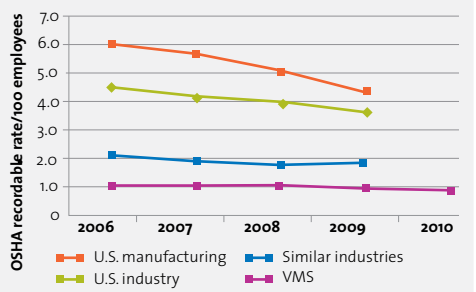
These controls have helped the company to assure customers and patients that their privacy and their sensitive personal information are not at risk while undergoing treatment on Varian's machines.

DART rates



DART (Days Away, Restricted, or Transferred) rates compared to industry benchmarks. These figures include all Varian's global operations. 2010 data not yet available for industry peers.

OSHA rates



OSHA recordable rates compared to benchmarks. This represents the occurrence of injuries or illnesses recordable under U.S. OSHA guidelines (any incident that requires medical treatment beyond simple First Aid).

"We receive statistics such as number of injuries, severity of injuries, days lost, and regulatory inspections for all Varian operations worldwide. Our health and safety policies are readily accessible on the intranet but in 2011 we're increasing activities to proactively communicate our health and safety messages to all employees globally."

Jim Weber, Varian, health and safety manager

EMPLOYEE HEALTH AND SAFETY

Varian is dedicated to conducting its business operations worldwide in a manner that supports employee occupational health and safety. The corporate health and safety manager develops programs in three main areas: 1) injury prevention, 2) emergency preparedness, and 3) regulatory compliance (including Occupational Safety and Health Administration (OSHA) regulations in the U.S.).

Six full-time health and safety professionals in the U.S. and their counterparts overseas continually assess health and safety performance in the businesses they support, and develop annual health and safety plans that cover the three areas detailed above. They regularly conduct hazard assessments, audit their businesses, identify training requirements, and then ensure that training is conducted as needed. These safety professionals received regulatory training during 2010 to keep pace with an ever more stringent regulatory environment. They also cross-audited portions of their safety programs to further their depth of knowledge and ensure that businesses are compliant with health and safety regulations.

Varian's health and safety programs have been effective. Between 2006 and 2010, DART (Days Away, Restricted, or Transferred) rates for Varian global operations decreased by nearly 42%. Varian's DART rates since 2006 were well below all industry benchmarks – benchmark data not yet available for 2010. (See chart left.)

OSHA recordable incidents per 100 employees held steady between 2006 and 2010, and were well below industry benchmarks. Varian counts these incidents – injuries or illnesses that are recordable under U.S. OSHA guidelines – globally. These include any incidents that require medical treatment beyond simple First Aid. From 2006 to 2009, Varian's rate stood at about 1.0 per 100 employees; in 2010, it dropped slightly to 0.9. Industry averages ranged between 2 and 6. (See chart left.)

Varian's larger sites have First Aid teams which receive refresher training every two years. They also have incident command teams that regularly conduct emergency drills based on simulations of natural disasters (earthquake, severe weather) and workplace hazards (fire, explosion, chemical spill).

Regular emergency drills paid off in 2010, when a small oil fire broke out at Varian's facility in Salt Lake City. The incident was quickly resolved within just a few hours. Power was turned off and employees were quickly evacuated. The Salt Lake City fire department extinguished the fire, and evacuated employees returned to work later that morning. In interviews with local media, Salt Lake City Fire Captain Michael Harp praised Varian's handling of the incident: "The company did a great job of evacuating and having accountability," he said. "They did an excellent job. They practice regularly."

Contractors and temporary employees are treated like permanent employees, when it comes to health and safety matters. They participate in all safety training classes and are issued the same personal protective equipment as appropriate (for example, safety glasses and shoes). If a temporary employee is injured, the incident is investigated just as if a permanent employee were injured.

Varian's health and safety policies are well communicated and easily accessible on the company intranet. A goal for 2011 is to increase activities to proactively communicate health and safety messages to all employees globally.

With nearly 600 detector systems installed globally, Varian protects the world's ports and borders from a number of very real threats.

PROTECTING PORTS AND BORDERS

The same technology that is used to deliver radiotherapy for cancer treatments can see through 17 inches of solid steel. This is why Varian, although primarily a medical company, also has a small but exciting business supplying cargo screening and testing systems to customers worldwide.

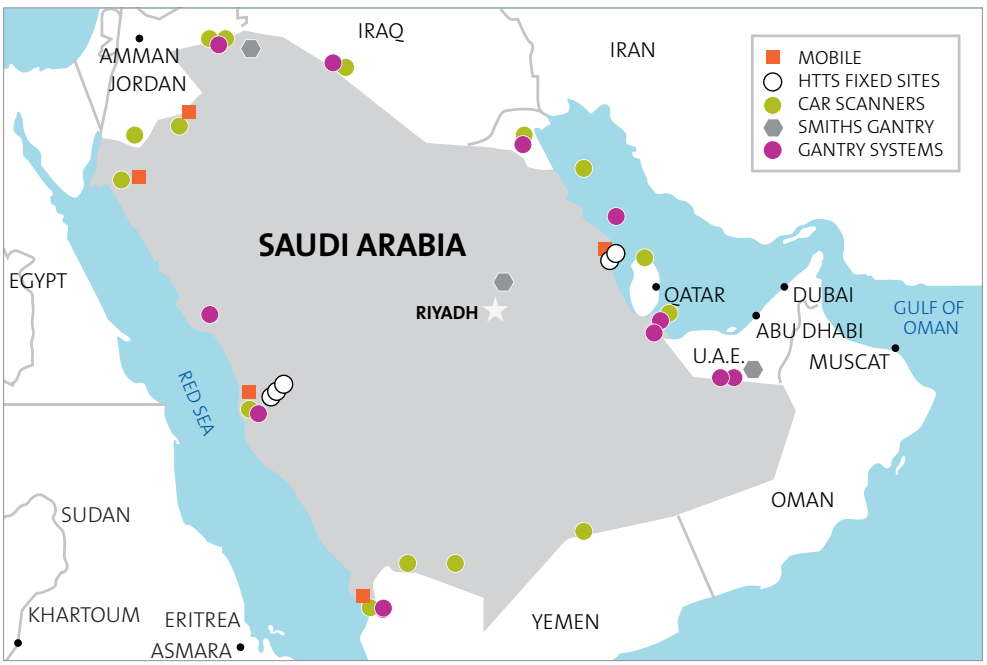
The Security and Inspection Products group addresses many types of threats by providing cargo screening system manufacturers and others with products for high-energy X-ray imaging. Varian's specialized linear accelerators are at the heart of cargo screening operations in some of the world's major ports. Weapons – as well as illicit cargo, cash, illegal drugs, and other contraband – are often detected in containers scanned by authorities using Varian-equipped systems.

"We continually strive to improve the speed and detection capabilities of our scanning systems to keep pace with the growing threats faced by the world," says Bob Drubka, head of Varian's Security & Inspection Products business. "We've developed systems that can check containers fast enough to avoid interrupting the flow of traffic at ports and borders, and we even have systems now that can scan moving trains."

As well as developing faster systems, Varian has also pioneered automatic materials discrimination technology to give authorities greater certainty about suspicious cargo. "Our early systems could show something suspicious but couldn't determine what it was," says Drubka. "Now, by using dual energies in the scanning process, we're able to tell whether suspicious materials are organic, inorganic, machinery or heavy metal, which is important because serious explosive threats such as dirty bombs would be shielded in lead, and lead is now detectable."

In the U.S., the high-energy IntellX system enhances automatic materials discrimination for the U.S. Department of Homeland Security. Trucks crossing the border are pulled into a scan bay, the driver is escorted out of the bay by a Customs and Border Patrol officer and the bay is readied for the truck scan. Trucks are scanned at 1.3 feet per second, producing a digital radiographic image of the truck and its contents. Varian currently has three IntellX units deployed at ports of entry along the Texas/Mexico border, scanning thousands of trucks, while seven more units will be deployed along the country's southern and northern borders in the next year.

In the Euro Tunnel between England and France, two Varian detection systems scan trucks and small vans prior to being loaded on trains, checking for illegal immigrants and explosive devices. When something suspicious is detected, the on-site police are notified. Since the systems were installed in 2002, they have scanned over one million vehicles.



Systems are heavily deployed at Saudi Arabia's many border crossings with Jordan, Iraq, Kuwait, Bahrain, Qatar, U.A.E., Oman and Yemen. These sites have multiple scanners while the crossing points are strengthened further at certain holiday or religious times by the deployment of up to 11 mobile units.

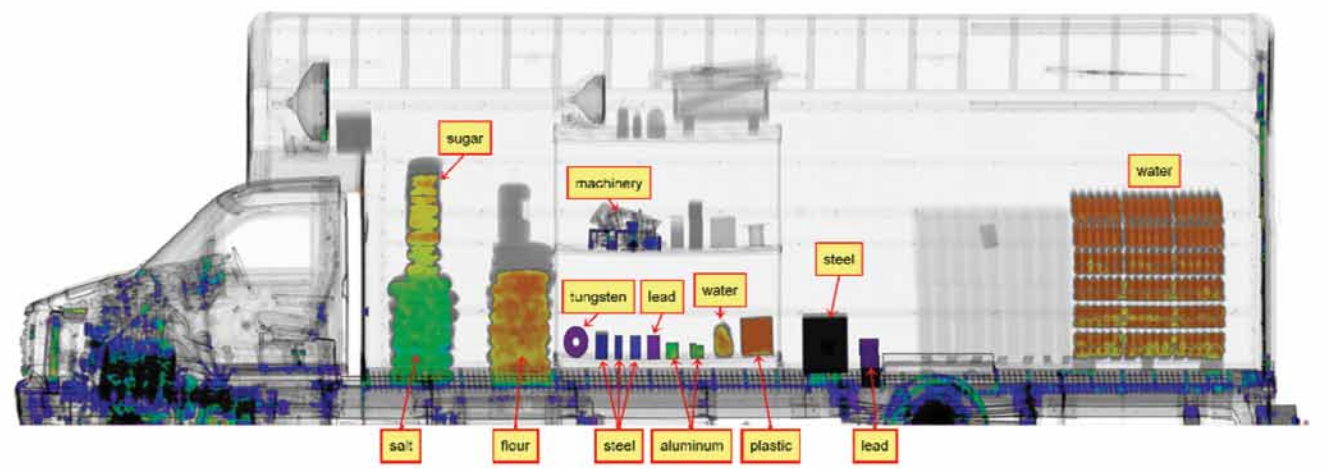
Saudi Arabia has the greatest number of high-energy cargo screening systems in the world, all of them incorporating Varian accelerators. Purchased primarily by Saudi customs, screening units are used to check containers at ports and trucks at border crossings. Saudi law requires 100% scanning of imported goods, primarily checking for prohibited goods such as alcohol and drugs.

At the country's main sea ports – Jeddah and Dammam – around 3,000 containers are scanned each day on five fixed scanners and two gantry systems. The capital, Riyadh, is used as a rail transport hub bringing containers from Jeddah or Dammam and a thousand containers are scanned each day.

PROTECTING ARIANE-5

As well as cargo screening systems, Varian's Security group supplies non-destructive testing systems that check the integrity of infrastructure such as bridges. These devices protect the European Space Agency's Ariane-5 rocket program, which provides heavy launch capability for humans and satellites. Varian's new K15A Linatron device has been installed in French Guiana where it operates in support of the Ariane-5 program and the new Vega rocket being developed as a next generation rocket motor, continuing the Agency's 20-year history of using industrial accelerators manufactured by Varian.

The Linatron is a high-energy accelerator which provides a robust source of X-rays to fully penetrate and image the Ariane-5 solid rocket boosters. "The resulting radiographs of the boosters and various rocket components provide essential quality control information to help assure the safe operation of the rockets when launched," says Bob Drubka.



Using color-coded materials discrimination technology, alarms can be triggered during the scanning process based on suspicious materials. In this image showing a truck loaded with test objects, the big steel plates (in black) are too thick to discriminate, smaller test objects (in gray) are too thin to discriminate, but all other test objects are colored. Note that the system correctly distinguishes between flour, sugar, and salt, and catches all heavy-metal materials.