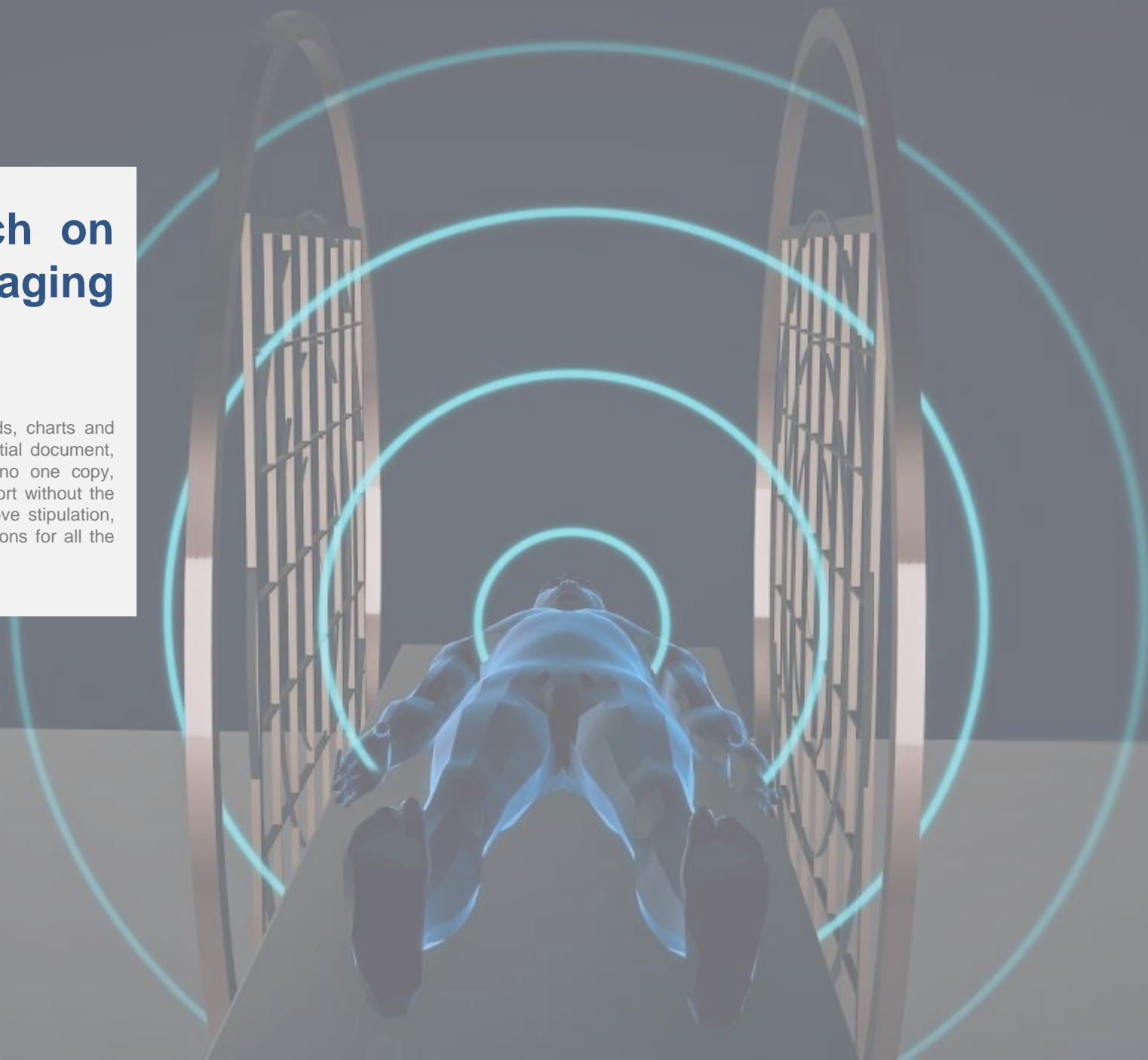


Independent Market Research on Key Components of X-ray Imaging Device

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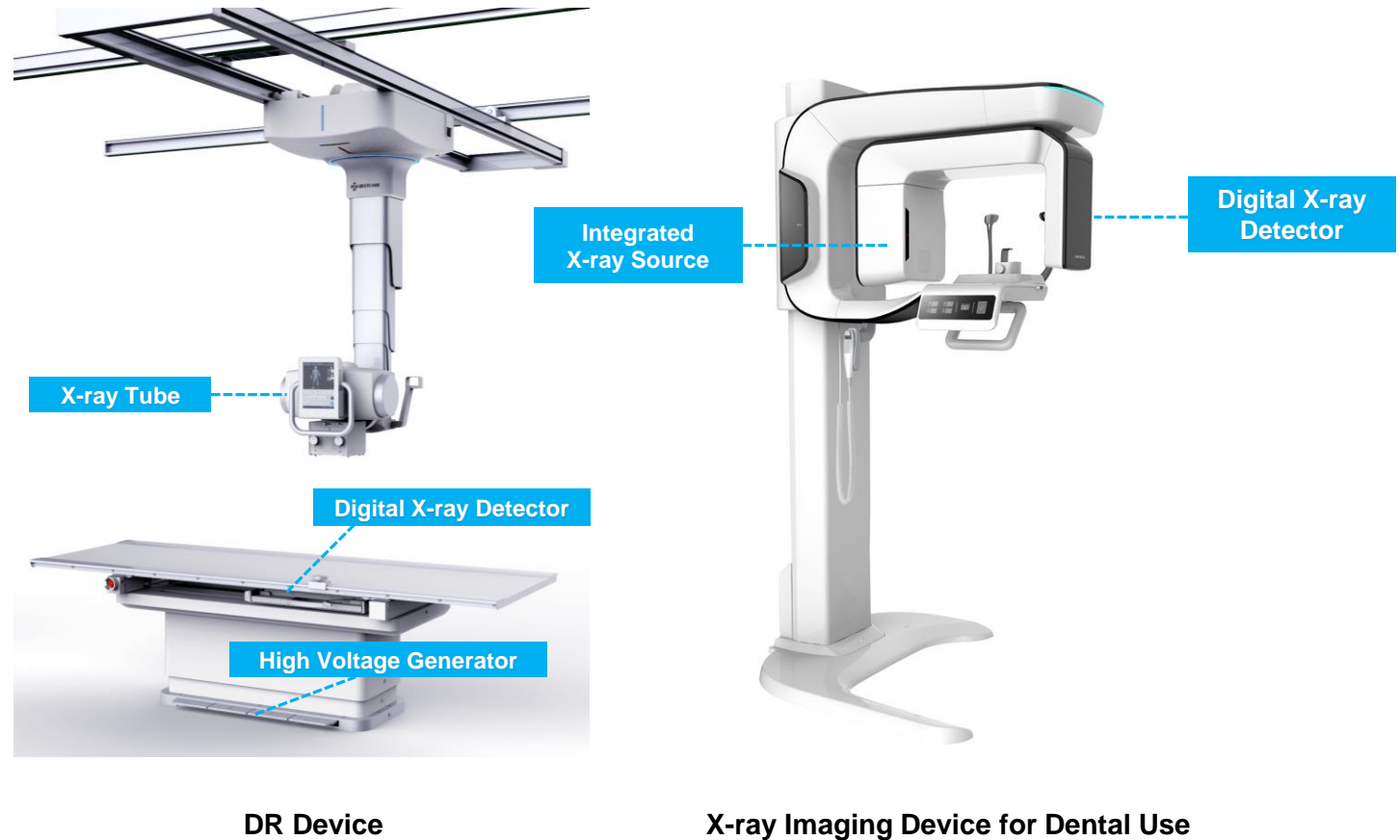


Key Components of X-ray Imaging Device

Value Chain Analysis of Key Components

- X-ray imaging device is widely used in medical, industrial and other fields. When passing through human tissues or workpieces of different densities and thicknesses, X-rays are absorbed to different degrees. Through the change and distribution of X-ray intensity, people can diagnose some invisible diseases or detect the nature, size and distribution of various macro or micro defects inside the workpiece.
- The key components of an X-ray imaging device mainly include digital X-ray detectors, high voltage generators, and X-ray tubes. A high voltage generator provides high voltage between the anode and cathode of the X-ray tube. The electric field created by this high voltage accelerates the filament free electrons released from the cathode towards the anode. The accelerated stream of high-energy electrons bombards the metal target at the anode, generating X-rays that pass through human tissues or workpieces. Then, the digital X-ray detector converts X-ray energy into electrical signals that can be recorded, eventually forming an image. In some specific application scenarios, such as X-ray imaging device for dental use, the high voltage generator and the X-ray tube together constitute the integrated X-ray source. The cost of the above mentioned three key components accounts for over 65% of the overall material cost of an X-ray imaging device.

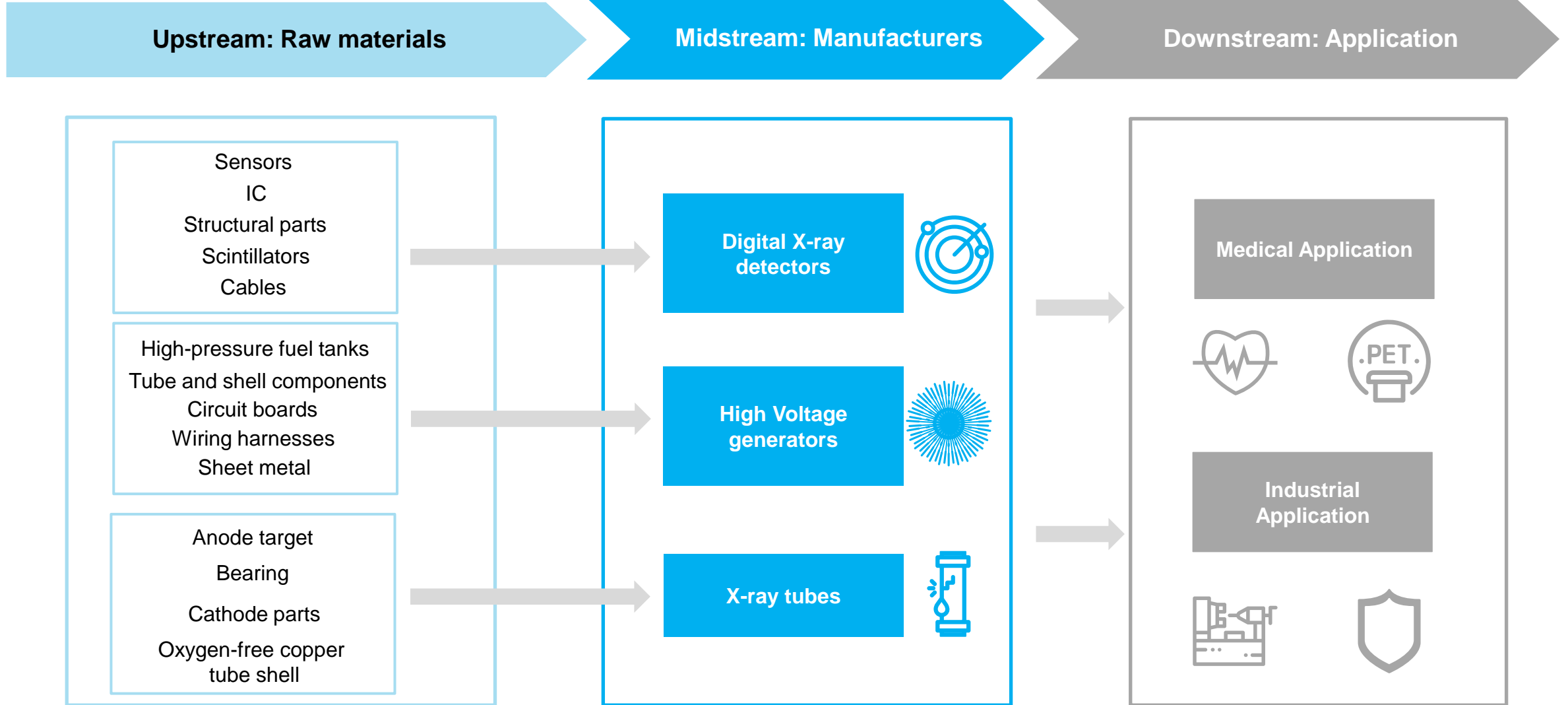
Diagram of the X-ray Imaging Device



Source: Frost & Sullivan

Key Components of X-ray Imaging Device

Value Chain Analysis of Key Components



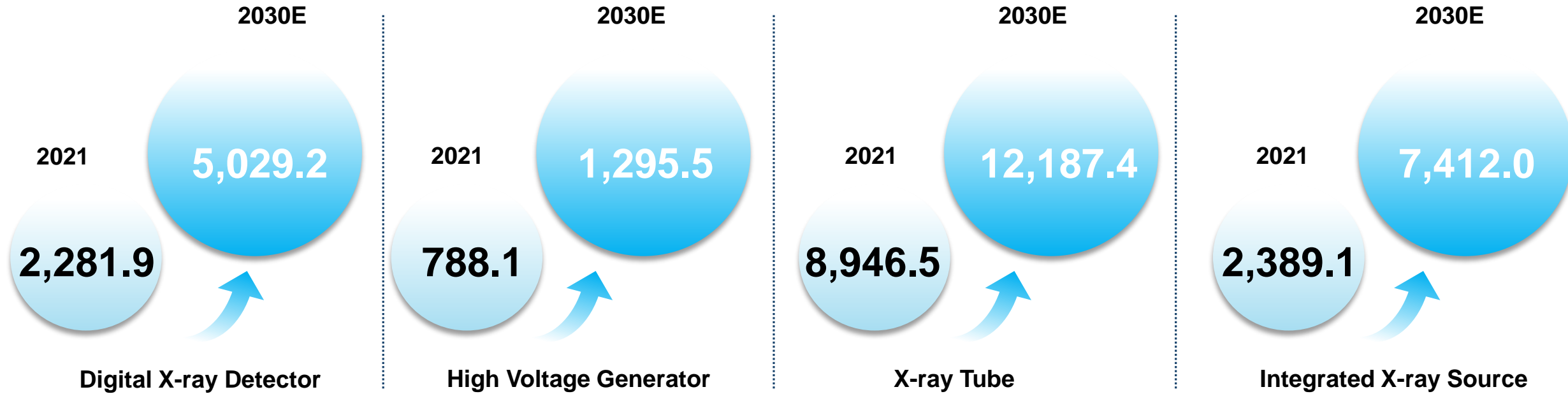
Source: Frost & Sullivan

Key Components of X-ray Imaging Device

Market Size of Global Digital X-ray Detector, High Voltage Generator, X-ray Tube and Integrated X-ray Source

Market Size of Global Digital X-ray Detector, High Voltage Generator, X-ray Tube and Integrated X-ray Source by Sales Value

USD Million



• Due to technological advancements, wide downstream application and further penetration of the X-ray imaging device, the digital X-ray detector industry has experienced significant growth in recent years. The market size of global digital X-ray detector market by sales value will grow from USD2,281.9 million in 2021 to USD5,029.2 million in 2030. Underpinned by thriving downstream market, the global sales value of high voltage generator is expected to increase from USD788.1 million in 2021 to USD1,295.5 million in 2030. The global market size of X-ray tube will also grow from USD8,946.5 million in 2021 to USD12,187.4 million in 2030. Furthermore, the global market size of integrated X-ray source is expected to increase from USD2,389.1 million to USD7,412.0 million in 2030 accordingly.

Source: Frost & Sullivan

Content

- **Definition and Classification of Digital X-ray Detector**
- **Market Size of Digital X-ray Detector-by Sales Volume and Sales Value (2017-2030E)**
- **Market Size of Digital X-ray Detector-by Application (2017-2030E)**
- **Market Size of Digital X-ray Detector-by Technology (2017-2030E)**
- **Major Technology Analysis of Digital X-ray Detector**
- **Development Trends of Digital X-ray Detector Industry**
- **Definition and Classification of High Voltage Generator/X-ray Tube/Integrated X-ray Source**
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 - ✓ **Medical Application (Dentistry/CT/Mammography/DR/C-arm/Oncology/Veterinary)**
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 - ✓ **Industrial (Battery Inspection/Chip and Electronics Manufacturing Inspection/...)**
 - **Analysis on Market Size, Development Drivers, and Future Trends**
- **...**

For more details, please contact: gabriel.lu@frostchina.com

Research Methodologies

- Frost & Sullivan is an independent global consulting firm, which was founded in 1961 in New York. It offers industry research and market strategies and provides growth consulting and corporate training. Its industry coverage includes automotive and transportation, chemicals, materials and food, commercial aviation, consumer products, energy and power systems, environment and building technologies, healthcare, industrial automation and electronics, industrial and machinery, and technology, media and telecom.
- The Frost & Sullivan's report includes information on key components of X-ray imaging device industry.
- Frost & Sullivan has conducted detailed primary research which involved discussing the status of the industry with certain leading industry participants and conducting interviews with relevant parties. Frost & Sullivan has also conducted secondary research which involved reviewing company reports, independent research reports and data based on its own research database. Frost & Sullivan has obtained the figures for the estimated total market size from historical data analysis plotted against macroeconomic data as well as considered the above-mentioned industry key drivers.
- Frost & Sullivan's Market Engineering Forecasting Methodology integrates several forecasting techniques with the Market Engineering Measurement-based System. It relies on the expertise of the analyst team in integrating the critical market elements investigated during the research phase of the project. These elements include:
 - ✓ Expert-opinion forecasting methodology
 - ✓ Integration of market drivers and restraints
 - ✓ Integration with the market challenges
 - ✓ Integration of the Market Engineering Measurement trends
 - ✓ Integration of econometric variables
- In compiling and preparing the Report, Frost & Sullivan has adopted the following assumptions:
 - ✓ The social, economic and political environment of the globe and China is likely to remain stable in the forecast period
 - ✓ Related industry key drivers are likely to drive the market in the forecast period

Source: Frost & Sullivan