



#### EXECUTIVE BRIEF

# From CPACS to CVIS The evolution of cardiology image and data management

As healthcare technologies improve and advance, the distinctions between them can often blur. The evolution of cardiovascular picture and archive systems (CPACS) to cardiovascular information systems (CVIS) is a powerful case in point. In this executive brief, we explore why the transformation from CPACS to CVIS took place and the key differences between these two critical cardiology solutions.

## Imaging before CVIS

Before the development of the CVIS, CPACS reigned supreme. Much like their PACS counterparts in radiology, CPACS were deployed solely to provide economical storage and convenient access to images. Cardiology diagnostics, procedures and treatments were far less specialized, as was the technology they employed. In hindsight, it was a much simpler time.

During this period, cardiology, like other service lines, functioned fairly independently. They were often siloed departments within stand-alone hospitals that maintained their own imaging equipment, surgical suites and inventory management. Cardiology departments also boasted large staffs and their own budgets, giving them significant power and influence within the hospital ecosystem.

## Cardiology transforms

Over the past 10 to 15 years, a wave of change has swept across the healthcare industry, bringing with it the widespread use of electronic health records (EHRs), the rise of hospital mergers and acquisitions, major technological advancements and a host of regulatory changes.

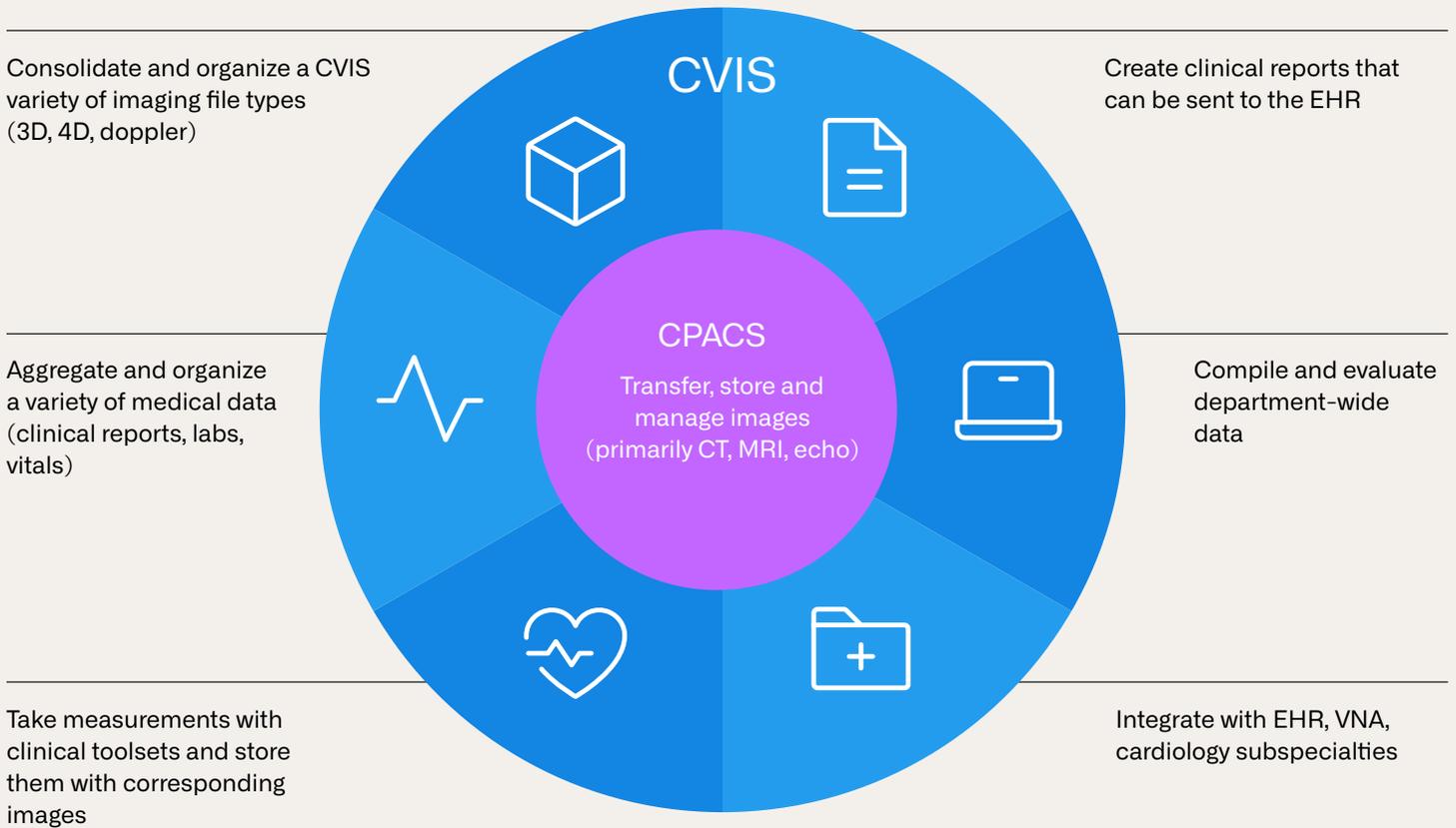
For cardiology, the advancements in technology have been dramatic. More sophisticated imaging techniques including 3D and 4D, doppler and strain imaging have created new insights into the cardiovascular system. Those changes have in turn paved the way for advanced treatments such as minimally-invasive mitral valve repair and transcatheter aortic valve replacement (TAVR). Technological strides have also led to clinical advancements such as electrophysiology (EP) and cardio-oncology, each requiring unique and specialized procedures, training and equipment.

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Workflows have also grown far more complex. Due to the trend of hospital consolidation, cardiology departments are no longer the 'islands' they once were. In the new enterprise healthcare model, their work, reports, images and data must now span multiple specialties, facilities and locations – across the continuum of care.



# Capabilities of CPACS vs CVIS



## From archive to information management

Naturally, as cardiology evolved, so too did the tools used to support it. Simply put, greater complexity demanded greater functionality.

Cardiology departments needed more than just a place to store images. They required solutions that could collect, organize, measure and report on cardiology data at the individual and enterprise levels. Consequently, picture archiving solutions, once the heart of the cardiology department, have become merely a component of more robust and multi-faceted cardiovascular information systems.

Today, CVIS are able to gather and organize a wide variety of imaging file types and diverse data such as clinical notes and lab reports. They feature toolsets that facilitate measurements and store that data with their corresponding images. CVIS allow cardiologists to create clinical reports and enable the collection and evaluation of department-wide data. And the most comprehensive and effective CVIS enable interoperability with systems essential to cardiology workflow, such as the

EHR, cardio subspecialties and modalities, and vendor neutral archives.

As cardiology continues to evolve, so too will the tools and technologies that support it. For now, CVIS offer the most extensive capabilities to help meet the complex needs of today's cardiology departments, but new developments, including the application of artificial intelligence, are setting the stage for exciting advances in the years ahead.

## Merge Cardio

Merge Cardio™ is a comprehensive CVIS that supports all cardiology modalities. Ranked Best in KLAS for cardiology for six consecutive years, it is vendor neutral, data agnostic and integrates fully with Merge Hemo™ for seamless cath lab connectivity. Merge Cardio also comes bundled with IBM iConnect® Enterprise Archive (by Merative), our award-winning VNA, to enable the storage and easy access of cardiology images and data across the enterprise.

## About Merative

Merative is a data, analytics and technology partner for the health industry, including providers, payers, life sciences companies and governments. With trusted technology and human expertise, Merative works with clients to drive real progress. Merative helps clients reassemble information and insights around the people they serve to improve healthcare delivery, decision making and performance. Merative, formerly IBM Watson Health, became a new standalone company as part of Francisco Partners in 2022. Learn more at [www.merative.com](http://www.merative.com)

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