

5

challenges in radiology imaging



(and how to tackle them)

In a profession where attention to detail and precision are paramount, radiologists face a multitude of challenges for reaching their peak performance. A radiologist's reading routine is often interrupted by inefficiencies in daily workflow, an ever-increasing workload, and occupational disorders (e.g. eye strain). This requires a proper turnaround, not just a few tweaks.

The use of well thought-through display technology is a key step in achieving a more streamlined workflow and helping radiologists achieve their full potential. In this ebook, you will learn what to look for when buying a diagnostic display in order to tackle some of the most pressing challenges facing radiology today.

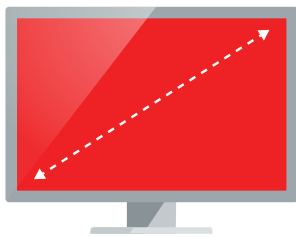
CHALLENGE #1

How to work more productively

With the shift from volume-based to value-based healthcare services, radiologists are now moving out of the radiology reading room to engage in more direct radiologist-patient communication and become part of the care team. At the same time, radiologists are confronted with a growing demand for imaging exams, resulting in more as well as more complex imaging studies. Display technology that helps users harness productivity and work more efficiently is essential.

Your checklist

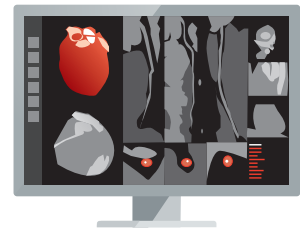
A large display form factor enables flexible positioning of multiple images with fewer image manipulations



Displays with high calibrated light and image-enhancing features lead to faster detection of subtle details



Use a monitor that allows viewing of different modalities, in grayscale and in color, on a single screen. This eliminates the need to change workstations or displays



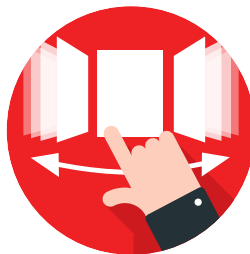
Displays with built-in features that automate routine tasks – such as Barco's tools for an intuitive workflow – make reading more efficient, aiding faster diagnosis



Pick a system including software for automated QA & calibration with no interruptions to the radiologist's workflow



Displays with high-speed controllers that quickly load the images and keep them in focus present an uninterrupted workflow



Invest in a display system that has proven to increase reading productivity



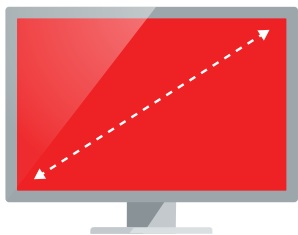
CHALLENGE #2

How to read more comfortably

Radiologists' comfort is integral for peak performance during long working days. A study conducted by the MarkeTech Group claims 85% of radiologists use three displays or more. Alternating between multiple screens can lead to physical discomfort, including eye fatigue, neck strain and back pain. Reading discomfort is reportedly experienced by 87% of radiologists.

Your checklist

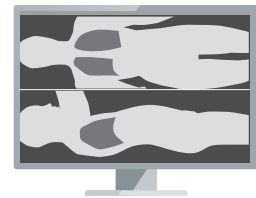
A large display form factor allows for flexible, more ergonomic viewing of multimodality images on one screen



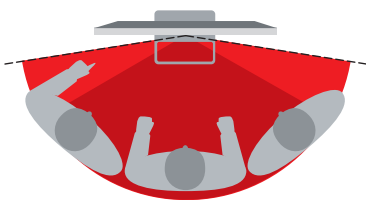
The ability to place a display in the perfect viewing position allows you to view images in a fixed, more relaxed way



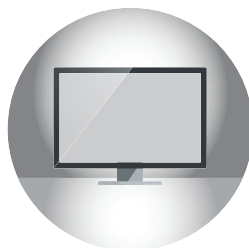
Minimize image manipulations (and occupational injuries) with a display that allows you to position images just the way you want (whether in the center of the display or over the entire screen)



A wide viewing angle (at least 178°) decreases the need for substantial head and eye movements



A display that offers highly calibrated brightness as well as built-in features to adjust display brightness to the ambient light ensures optimal reading conditions



A non-reflective glass cover is not only safeguarding image quality, it is also easy on the eyes



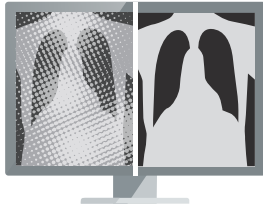
CHALLENGE #3

How to diagnose with more confidence

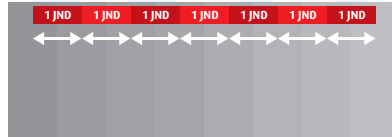
Support for diagnostic confidence is key for maximizing radiologists' performance. Standard displays lack the ability to optimize the quality of diagnostic images. Ideally, display technologies should include image-enhancing features to provide radiologists with the accuracy they need to improve detection probability.

Your checklist

Sharp image quality, incl. contrast, color/grayscale accuracy, luminance uniformity & stability, is a first prerequisite to achieve the best possible image on screen



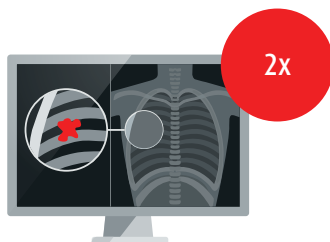
The higher the display brightness (esp. calibrated brightness), the more Just Noticeable Differences can be perceived in order to see more subtle details



A high-precision integrated luminance photometer in combination with QA and calibration software is vital to ensure stable, DICOM-compliant images over time



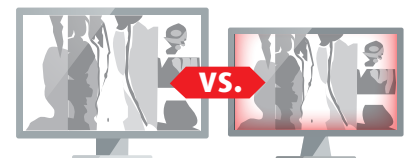
Displays with built-in features to enhance the brightness and contrast of images – e.g. Barco's SpotView™ & SpotView™ Mag – increase focus on details that require extra attention



A non-reflective glass cover allows for easy cleaning and removal of finger prints, dust, etc. to protect the image quality at all times



Choose a display that is 100% ACR compliant across the screen. Not all displays can guarantee a luminance ratio of at least 350 cd/m² when images are viewed off center.



CHALLENGE #4

How to get the most out of your PACS system

For ultimate value and productive workflow, 100% uptime of your Picture Archiving and Communication System (PACS) workstations is ideal. An increasingly complex and robust regulatory landscape means PACS monitoring and reporting is now more important than ever.

Your checklist

An online service for automated, remote Quality Assurance & calibration keeps your display systems continually up and running



Invest in a QA solution that is compatible with all types of displays and graphics boards



FULLY COMPATIBLE

Pick a QA solution that monitors displays across the entire healthcare enterprise to eliminate inconsistencies across departments and hospital sites



Automated compliance with different regional regulatory policies is essential, especially when you're managing multiple sites and locations



A QA system should include capabilities for extensive reporting, performance follow up and budget planning



CHALLENGE #5

How to reduce cost to a minimum

Containing costs is an objective for every healthcare facility. Every time a PACS workstation is down for maintenance or repair, providers lose money. At the same time, healthcare providers are expected to do more with fewer budgets.

Your checklist

Purchase a complete product solution from one vendor – including a high-quality display, ultra-fast controller and built-in software – so the system functions smoothly



An all-in-one imaging solution also simplifies management of the display network and leads to a reduction in operational expenditure



Invest in a complete product solution that has achieved rigorous validation testing with all major workstation manufacturers and PACS applications. Barco is the only supplier that has such a partner validation program



Check the warranty conditions: does it cover the entire display system, including the graphics controller and backlight? With Barco, all of these components are warranted for a period of 5 years.



Meet Coronis Fusion

Barco's Coronis Fusion display systems have everything it takes to increase radiologist productivity, reading comfort and confidence.

- ✓ Increases productivity by up to 19% (figures originate from Montefiore study)
- ✓ Proven to reduce eye strain (figures originate from Montefiore study)
- ✓ 50% more calibrated light for better detection
- ✓ 100% ACR compliance across the screen for diagnostic confidence
- ✓ 100% uptime of your PACS system with intervention-free calibration and QA
- ✓ Only all-in-one display system, including display controllers and software
- ✓ 5-year warranty on the entire system, including the backlight



Healthcare imaging specialist Barco has been recognized by Frost & Sullivan as the Visionary Innovation Leader in medical displays. For more information about Barco's healthcare solutions and products, visit www.barco.com/healthcare