



**PHILIPS**

Image guided therapy

*Azurion 7*

With Azurion,  
**performance and  
superior care become one**

**17%** reduction of procedure time with Philips Azurion at St. Antonius Hospital.<sup>1</sup>

The ability to treat one more patient per day today, or in the future



Treating patients. It's what you do. You strive every day to provide the best patient care, quickly and reliably, no matter which procedure you are performing. So try to imagine an increased number of procedures, for more patients, carried out consistently and efficiently with fewer preparation errors. Workflow can be optimized and performed on an intuitive platform designed to make your day a lot easier.



Azurion enables you to provide superior care



Azurion helps you optimize your lab performance



An easy-to-use platform supports you in quickly and easily performing diverse procedures

This is exemplified by our Image Guided Therapy System Azurion 7. It allows you to easily and confidently perform a wide range of routine and complex procedures with a unique user experience, helping you optimize your lab performance and provide superior care. Azurion is powered by ConnectOS, a real-time multi-workspot technology designed specifically for the Azurion image guided therapy platform.

As the interventional space evolves, we continue to integrate essential lab systems and tools onto the Azurion platform for a better user experience. The Azurion integrated lab offers a seamless user experience that gives you control of all compatible applications from a single touch screen at table side, to help make fast and informed decisions without breaking sterility.

With Azurion's industry leading image guided therapy platform, we reinforce our commitment to you and your patients. Our goal is to help you effectively meet today's challenges so that you are ready for the future.



# Outstanding user experience

At Philips, we are guided by you. With Azurion, we've brought the user experience and simplicity of touch screen controls right where it's needed to make a difference to lab workflow.

## Full control at table side to enhance decision making

You can now control all compatible applications in the interventional lab via the central touch screen module and FlexVision Pro. Not only does this improve workflow within the exam room, it helps reduce the need for team members to leave the sterile area and walk to the control room during procedures. This can save time and help avoid delays.

## Gain advanced physiologic guidance to help improve treatment outcomes

You can access IntraSight, a comprehensive suite of clinically proven<sup>2-6</sup> imaging, physiology and co-registration<sup>7</sup> tools, via the central touch screen module. These tools allow you to go beyond the angiogram and complete your view of the target vessel, to help you make fast, informed clinical decisions.

## Azurion with FlexArm – more independent control for physicians

The FlexArm option further evolves Azurion's table side control with the intuitive Axsys controller to make procedures flow naturally and easily. When changes or complications occur, the physician can quickly and easily take action. This can also reduce the need to move in and out of the sterile field during a procedure.

## Designed around you and your procedure

All Azurion systems and interventional tools use the same standardized user interface to support training. Use has been further simplified through a sophisticated help function. You can access digital user guides with one click for on-the-spot assistance.

## Clear and simple to use

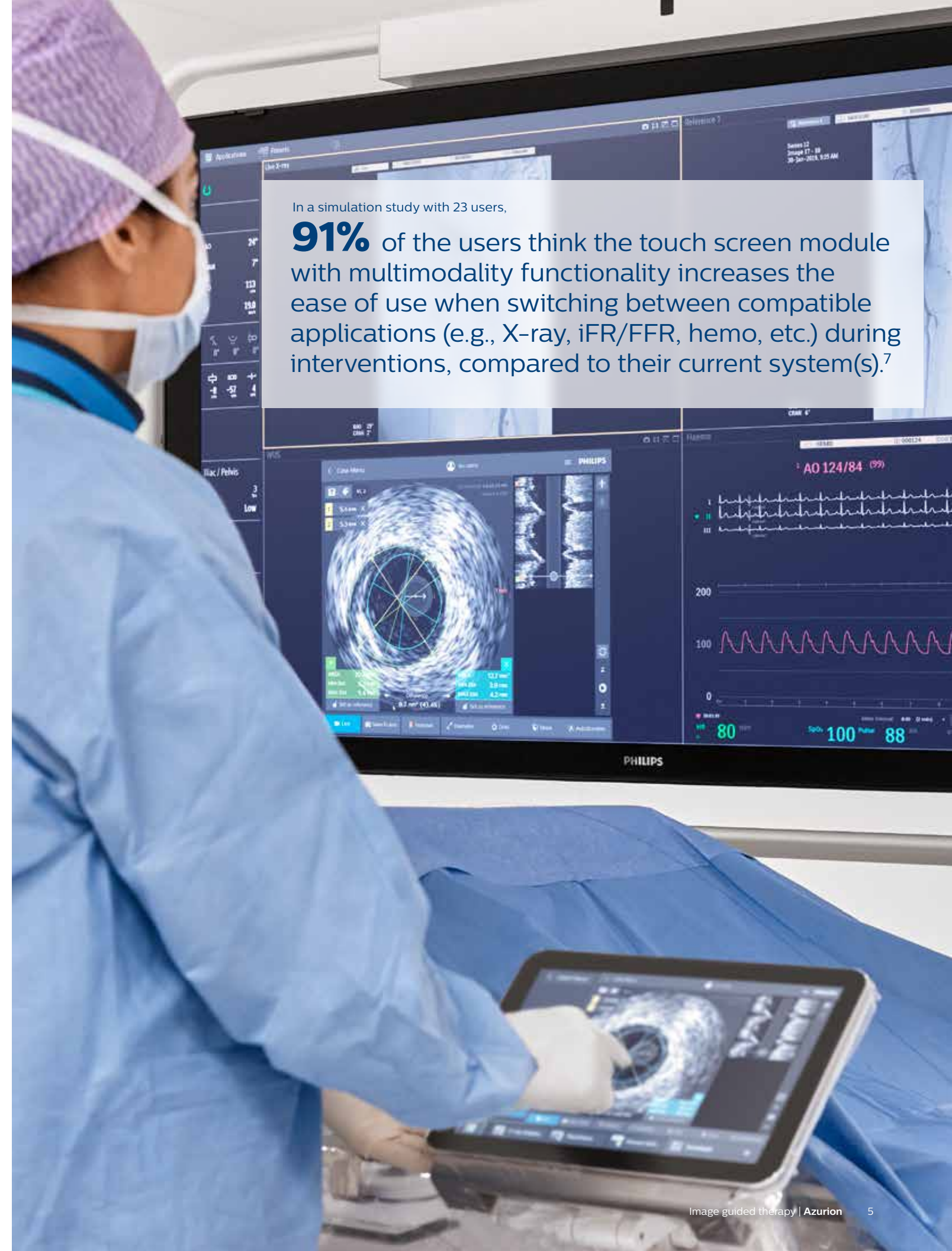
On screen, information clearly stands out against the distinctive black background where active applications are highlighted. Backlit icons and distinctly shaped buttons on the Control Module promote intuitive operation. All controls are designed for easy cleaning to meet stringent sterility requirements.

## Less clutter and faster workflow

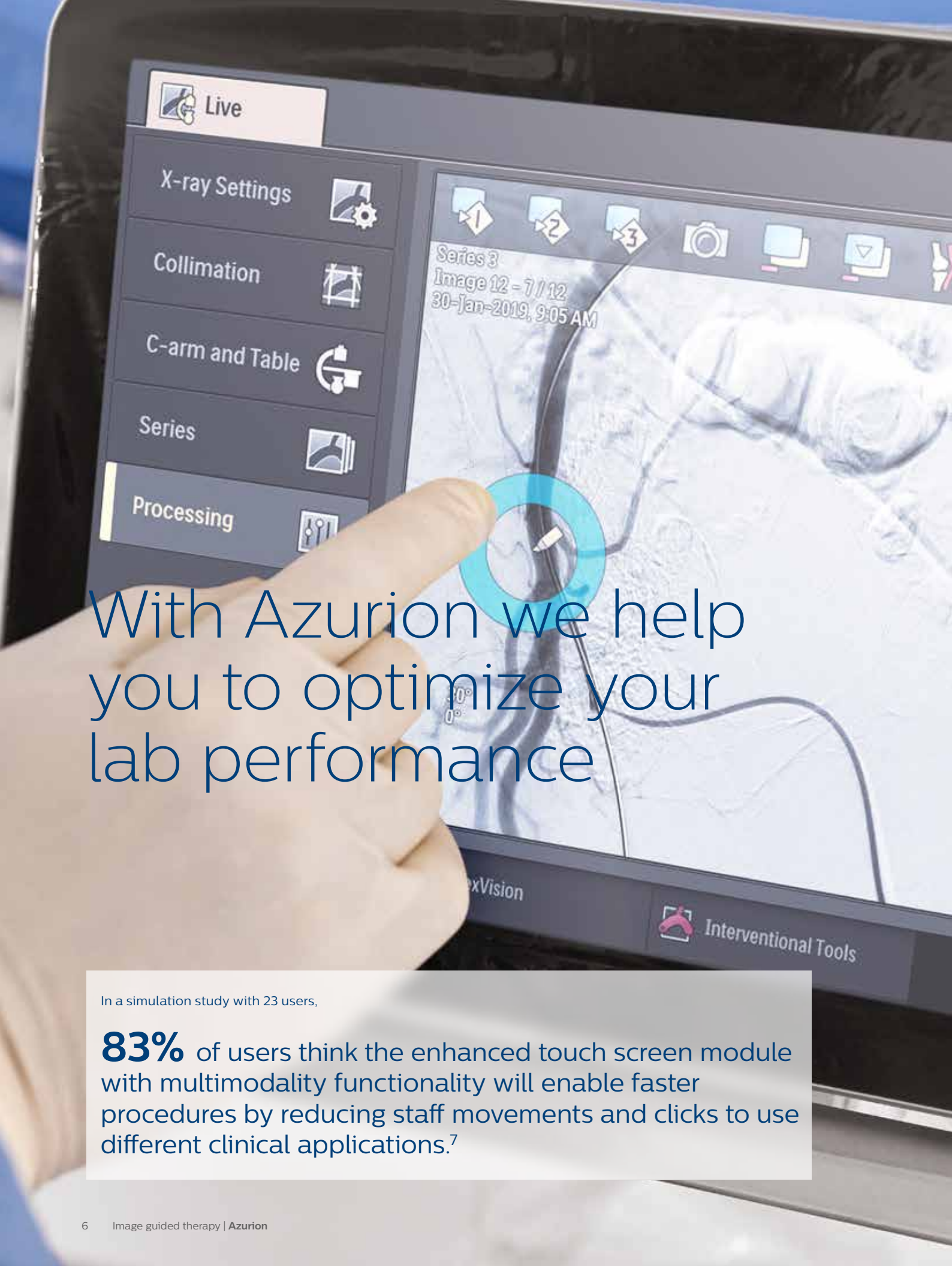
With the Azurion integrated lab, controlling all compatible applications at the touch screen module can reduce extra interfaces and controls table side. The FlexSpot works according to the same principle. It gives you access to all compatible applications in one compact, customizable workplace that can be placed in the control room or exam room where needed. Save time by setting the display to re-arrange and re-size as applications are opened and closed.

In a simulation study with 23 users,

**91%** of the users think the touch screen module with multimodality functionality increases the ease of use when switching between compatible applications (e.g., X-ray, iFR/FFR, hemo, etc.) during interventions, compared to their current system(s).<sup>7</sup>







With Azurion we help you to optimize your lab performance

In a simulation study with 23 users,

**83%** of users think the enhanced touch screen module with multimodality functionality will enable faster procedures by reducing staff movements and clicks to use different clinical applications.<sup>7</sup>

Azurion's integrated approach can help you achieve measurable improvements in throughput, cost reduction and staff satisfaction.

**Do more at table side**

With our enhanced touch screen module, you will experience simpler, smoother procedures, based on familiar tablet interactions. For example, you can now easily mark relevant details on 2D images on the touch screen with your fingertip.

**Azurion allows you to run an entire case without breaking sterility**

The touch screen module offers total control within the sterile field. Run an entire case table side as you quickly diagnose, navigate, annotate and measure to your exact specifications, even when wearing gloves and under a sterile drape. Table side control saves you from having to go to the control room to access applications.

**Save time through Instant Parallel Working**

The Azurion 7 image guided therapy system has been specifically designed to save time by enabling interventional team members to do two tasks at the same time in the exam room and control room - without interrupting each other. As an example, while fluoroscopy/exposure is taking place, a technologist in the control room can instantly review previous images from the same patient, prepare the next exam or finish reporting on another patient. This leads to higher throughput and faster exam turnover without compromising quality of care.

**Simplify workflow**

Enter patient information once and it is automatically transferred to connected applications to reduce data entry errors. To save time, IntelliSpace Cardiovascular<sup>8</sup> and IntelliSpace Portal launch automatically with the specific patient on the exam room monitor.

Azurion's full system automatic position control (APC) gives you more flexibility to recall the stored position of the C-arm, table and other parameters for a particular image to simplify positioning.

**Imagine an easier work day**

You can combine different user centric workspots (FlexVision Pro, FlexSpot and touch screen modules) to view, control and run applications where and when needed. At these workspots you can co-register<sup>9</sup> iFR or IVUS data with the angiogram, so you have the tools in hand to manage procedure quality and patient care. Together these flexible workspots allow you to customize your workflow to boost efficiency.

**Safeguard clinical performance and enhance lab security over time with Windows 10 platform**

The standard Windows 10 platform can help support compliance with the latest security and standards to protect patient data. It can also accommodate new software options to extend your system's clinical relevance over time.



Touch screen module Pro



FlexSpot



FlexVision Pro



# Azurion enables you to provide superior care

As patient volumes rise and procedures become more complex, how do you maintain high standards of quality and safety in your healthcare facility?

## Clinical demands are getting more specific. So are we.

Our clinical suites are tailored to meet your specific challenges, while offering you the flexibility to carry out procedures in the easiest, most efficient way. We have a flexible portfolio of integrated technologies and services to support the full interventional spectrum. We also offer Hybrid OR solutions that create an innovative care environment for performing open and minimally invasive surgical procedures.

## Simplified set-up and operation

The Azurion 7 uses a range of ProcedureCards to help optimize and standardize system set-up for all your cases. The system will automatically select the appropriate ProcedureCard(s) based on the RIS/HIS/CIS code of the scheduled procedure.

ProcedureCards can increase the consistency of exams by offering presets (e.g. most-frequently used, default protocols and user-specified settings) on the procedure, physician or department level.

In addition, hospital checklists and/or protocols can be uploaded into the ProcedureCards to help safeguard the consistency of interventional procedures and reduce preparation errors.

## Enhance patient care with continuous monitoring

The Philips Interventional Hemodynamic System is integrated with the IntelliVue X3 patient monitor, allowing continuous patient monitoring throughout procedures in the interventional workflow. There is no need to change cables, minimizing disruption to vulnerable patients and giving you more time to focus on them. Continuous patient monitoring also results in a gap-free patient record.

## Clinical suites



In a simulation study with 23 users,

**78%** of users think the ease of use of the enhanced touch screen module with multimodality functionality will increase their utilization of different clinical applications in interventional procedures.<sup>7</sup>



# High standards of safety and low radiation exposure

As you look for new radiation dose management strategies to continue to enhance patient and staff safety, while maintaining and enhancing your level of care, we can support you in meeting your goals.

## Managing dose efficiently

The Azurion 7 incorporates many DoseWise solutions, a comprehensive range of radiation dose management tools, training, and integrated product technologies that aim to help you take control over patient care, staff safety, and regulatory compliance. The MRC200+ X-ray tube incorporates SpectraBeam filtration, which helps maintain image quality at a low dose. The Zero Dose Positioning function lets you pan the table, change table height or field-of-view on your Last Image Hold (LIH) image. This means you can already see the effect of moving the table or changing the field-of-view on your region of interest to prepare your next run without using fluoroscopy.

## Perform standardized quality assurance verifications in just 5 minutes<sup>10</sup>

To make it easier for you to routinely perform consistent verification tests of radiation dose and image quality, only Philips offers the User Quality Control Mode (UQCM) tool on its Azurion system. With this option, you can independently verify and audit the radiation and image quality related factors of your Azurion system in a standardized way in just 5 minutes,<sup>10</sup> as well as carry out a range of validation and quality assurance tests.

## High quality images at low X-ray dose

Our ClarityIQ X-ray imaging technology provides superb image quality at significantly lower dose across clinical areas, patients, and operators.<sup>11</sup> In routine coronary procedures,<sup>12</sup> ClarityIQ technology may reduce patient radiation dose (as total dose-area product) by 67%<sup>13</sup> for the total procedure without affecting the procedural performance (fluoroscopy time and number of exposure images) as compared to equivalent procedures on an Allura Xper system, as demonstrated in one single-center study.<sup>14</sup> For iliac DSA procedures, one study showed that ClarityIQ reduces patient dose by 83%,<sup>15</sup> while maintaining equivalent image quality, compared to a system without ClarityIQ.<sup>13</sup>

## Managing dose across your organization

Philips DoseAware provides real-time feedback in the exam room so you can immediately adjust working habits to manage radiation exposure with your staff. A critical component in providing exceptional patient care is strong radiation control and management. We can help you create a comprehensive dose management program with DoseWise Portal at its core. This turnkey dose management solution gives you control over patient dose and staff occupational dose. It increases transparency across the entire enterprise and enables you to make data-driven decisions concerning quality initiatives and radiation management.



# Azurion – a comprehensive image guided therapy platform

The Azurion 7 integrated lab brings together a range of sophisticated interventional tools, including clinically proven<sup>2-6</sup> imaging and physiology tools, advanced hemodynamic measurements and cardiac informatics to support clinical excellence during procedures.



## **Azurion 7 C/F12**

With its 12" Flat Detector, the 7 Series provides high-resolution imaging over a large field-of-view with flexible projection capabilities, making it ideal for cardiac interventions. The entire coronary tree can be visualized in a single view with minimal table panning.



## **Azurion 7 C/F20**

Enhance visibility for diverse cardiac and vascular procedures with the excellent image quality and broad coverage of the next generation 20" Flat Detector. This system supports head-to-toe imaging and patient access from all sides.



## **Azurion 7 C20 with FlexArm**

Create a Hybrid OR that provides unlimited imaging flexibility for diverse procedures and exceptional positioning freedom for medical teams with the Azurion 7 and the next generation 20" Flat Detector, combined with the ceiling-mounted FlexArm option. You get a highly cost-effective environment that is ready for the procedures of the future.



## **Azurion 7 C20 with FlexMove**

Move to a Hybrid OR with confidence, with the Azurion 7 and the next generation 20" Flat Detector, combined with the ceiling-mounted FlexMove option. FlexMove offers exceptional workflow flexibility to perform open and minimally invasive procedures in the same room.



## **Azurion 7 B12/12**

The Azurion 7 biplane system with two 12" Flat Detectors provides high-resolution imaging and positioning flexibility to reveal critical anatomical information during congenital heart and electrophysiology procedures.



## **Azurion 7 B20/15**

Enhance insight and certainty during neuro interventions with the Azurion 7 biplane system. It pairs a 20" frontal with a 15" lateral detector.



## **Azurion 7 B20/12**

The Azurion 7 biplane system with a 20" and 12" Flat Detector provides exceptional clarity of detail and navigational precision to support a wide range of challenging cardiac and vascular interventions.





## High productivity combined with low cost of ownership

With Philips, you get the best service performance<sup>16</sup> which enables you to treat more patients,<sup>17</sup> and professional support to help you deliver cost-efficient care.

### Best service performance<sup>16</sup> enables you to treat more patients<sup>17</sup>

Staying on top of today's complex healthcare environment is challenging enough without a constant concern of keeping your systems up and running smoothly. With Philips, your operations are protected by the best overall service engineer performance for imaging systems according to IMV ServiceTrak for 5 years in a row.<sup>16</sup> Philips remotely connected systems provide 135 more hours of operational availability per year, enabling you to treat more patients.<sup>17</sup>

### Professional support helps you deliver cost-efficient care

To help you fully leverage your financial, technological and staffing resources and realize a high return on your investment, we offer professional support through our experienced network of over 7,000 field service engineers, as well as a flexible service offering that includes:

- Innovative financing solutions tailored to meet the needs of healthcare organizations
- A broad range of healthcare consulting programs to help your organization further enhance the efficiency and efficacy of your care delivery process
- Philips Healthcare Education, offering comprehensive learning options designed to help you meet your needs.

### Cost-effectively manage future upgrades with the Technology Maximizer program

Technology Maximizer is a program that runs in tandem with your Philips Service Agreement.<sup>18</sup> When you opt into the program, you receive the latest available software and hardware<sup>19</sup> technology releases for a fraction of the cost of purchasing them individually. The Technology Maximizer Plus allows you to further tailor upgrades to reduce costs. No need to wait for budget approval. No need to buy individual upgrades. Just a cost-effective way to manage ongoing technology upgrades through your operational budget.

### Unlock your potential

Philips Healthcare Education can help unlock the full potential of your staff, technology and organization to meet new challenges through innovative, meaningful and evidence-based healthcare education. Our comprehensive clinical, technical and business-related courses, programs and learning paths are designed to help you meet the challenges of controlling costs, streamlining workflow and improving patient care.

Philips remotely connected systems provide

**135** more hours of operational availability on average, per year, enabling you to treat more patients.<sup>17</sup>



## References

1. Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions.
2. Davies JE, et al. DEFINE-FLAIR: A Multi-Centre, Prospective, International, Randomized, Blinded Comparison of Clinical Outcomes and Cost Efficiencies of iFR and FFR Decision-Making for Physiological Guided Coronary Revascularization. *New England Journal of Medicine*, epub March 18, 2017.
3. Gotberg M, et al., Instantaneous Wave-Free Ratio Versus Fractional Flow Reserve Guided Intervention (IFR-SWEDEHEART): A Multicenter, Prospective, Registry-Based Randomized Clinical Trial. *New England Journal of Medicine*, epub March 18, 2017.
4. Patel M. "Cost-effectiveness of instantaneous wave-Free Ratio (iFR) compared with Fractional Flow Reserve (FFR) to guide coronary revascularization decision-making." Late-breaking Clinical Trial presentation at ACC on March 10, 2018.
5. Maehara A, Matsumura M, Ali ZA, Mintz GS, Stone GW. IVUS-guided versus OCT-guided coronary stent implantation. *J Am Coll Cardiol Img*. 2017;10:1487-1503.
6. Choi K, et al. Impact of Intravascular Ultrasound-Guided Percutaneous Coronary Intervention on Long-Term Clinical Outcomes in Patients Undergoing Complex Procedures. *JACC: Cardiovascular Interventions*. Mar 2019, 4281; DOI: 10.1016/j.jcin.2019.01.227.
7. Results obtained during a Usability Evaluation in the period of May and June 2019. The tests involved 23 clinicians (16 physicians and 7 technologists) from Europe who performed procedures using Azurion 2.1 image guided therapy system in a cardiac workflow and non-cardiac workflow in a simulated interventional lab environment.
8. It is the user's responsibility to ensure that Philips network requirements (such as performance, VPN) for IntelliSpace Cardiovascular are met. Note: Automatic same patient launch feature is available only with specific versions of ISCV and ISP.
9. Co-registration tools available within IntraSight 7 configuration via SyncVision.
10. The related tests were performed by 3 users with different background and experience level. The test timings were performed using a frontal plane of an Azurion biplane R2.1 system (FD20/15N, STM-1713 (Dick Bruna), location QL-1).
11. In 28 individual comparative studies, Philips ClarityIQ was associated with reductions in patient radiation exposure.
12. Routine coronary interventions comprise of fluoroscopy and exposure usage.
13. (95% CI of 53%, 77% for all diagnostic and interventional coronary procedures). The results of the application of dose reduction techniques will vary depending on the clinical task, patient size, anatomical location and clinical practice. The interventional cardiologist assisted by a physicist as necessary has to determine the appropriate settings for each specific clinical task.
14. Results based on total dose area product from a single center prospective controlled randomized study (University Hospital Gent, Belgium) on 122 patients (42 for Allura Xper and 80 for AlluraClarity) undergoing coronary procedures. Of the 122 patients, 102 (83.6%) had a diagnostic procedure without intervention and 51 (41.8%) resulted in a diagnosis of no coronary disease. Patient radiation exposure was quantified using cumulative dose area product as collected from Radiation Dose Structured Reports and/or Allura Reports. Baseline dose was maintained by configuring both systems to power up with the lowest dose settings as default and default procedure settings for cardio were used. Exam duration and fluoro time was consistent between the systems and an increase in number of exposure images and runs with the AlluraClarity was attributed to the biplane configuration compared to the monoplane configuration of the Allura Xper.
15. Results based on DSA dose area product per frame from a single center prospective randomized study (St. Antonius Hospital, Nieuwegein, Netherlands) on 48 patients. DSA runs for Allura Xper with ClarityIQ and Allura Xper without ClarityIQ were randomly acquired on the same patient under same condition of geometry, field of view and injection protocol. Image quality was based on subjective assessment (side-by-side, equal or superior than the other, blinded review by 5 independent radiologists).
16. IMV ServiceTrak 2018 X-ray Cardiovascular Systems.
17. Data shown is an average, based on the comparison between remotely connected and non-remotely connected systems. Data sample from 2018 for Allura FD and Azurion systems (n=9955).
18. Eligible RightFit Service Agreements are available with Technology Maximizer.
19. Not currently available for ultrasound hardware.

