

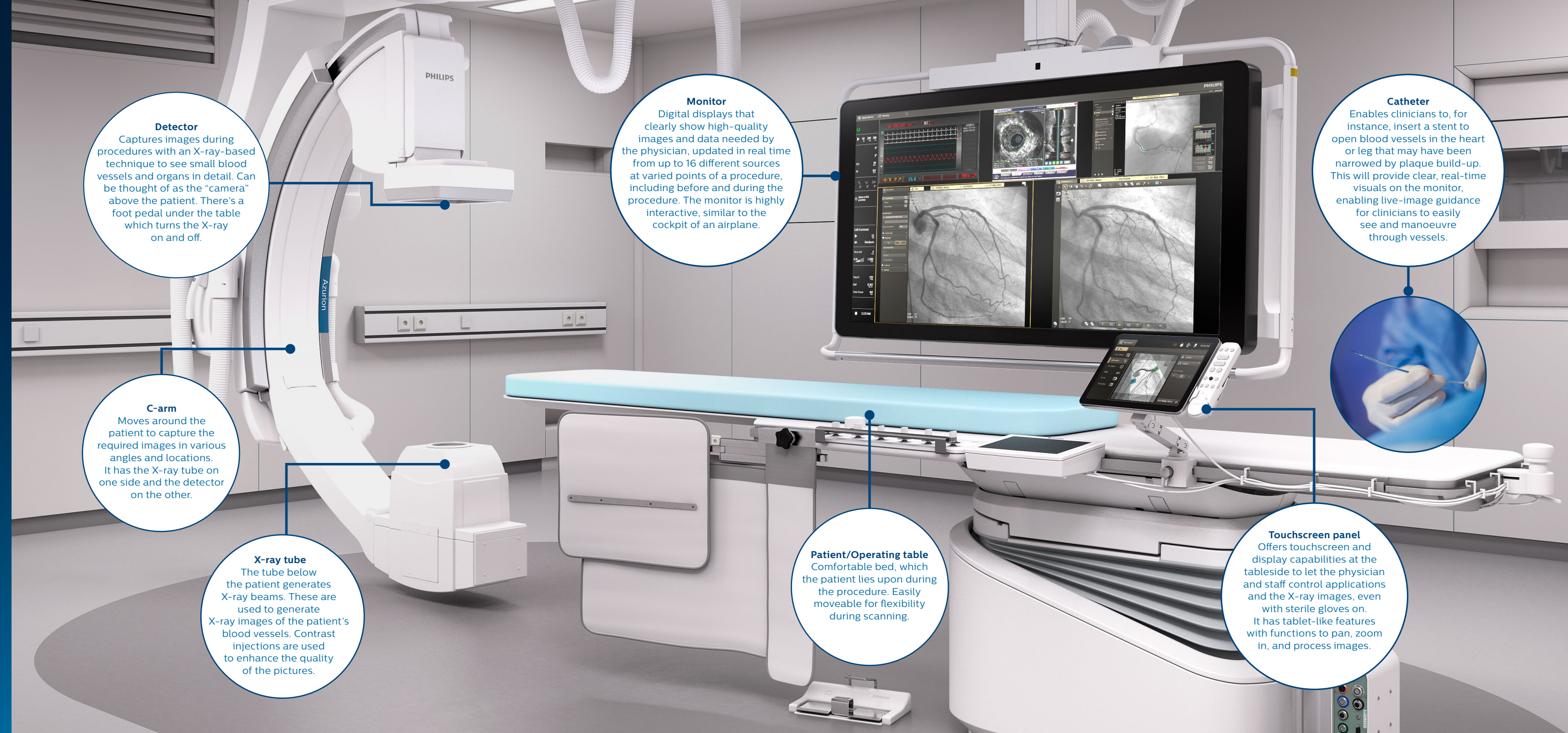
# Interventional Suite 101

An interventional suite (also called a catheterization lab) is a state-of-the-art procedure environment in hospitals and outpatient clinics that uses advanced imaging guidance to help physicians treat patients using minimally invasive tools and techniques.

Image-guided therapy (IGT), also known as minimally invasive therapy, relies on miniature tools such as catheters, balloons and wires which physicians guide using advanced live imaging, through a small opening in the skin. Procedures once requiring large surgical incisions are now able to be performed through tiny pencil-point sized incisions. Additionally, new procedures have been developed which can only be performed using image-guided therapy.

The types of diseases that can be treated in these interventional labs include vascular diseases, heart disease, stroke, cancer, kidney and liver diseases, spine fractures, trauma, aneurysms and more.

This type of therapy makes use of live X-ray, ultrasound, 3D and other imaging guidance to enable faster, more cost-effective, and patient care delivery.



**Detector**  
Captures images during procedures with an X-ray-based technique to see small blood vessels and organs in detail. Can be thought of as the "camera" above the patient. There's a foot pedal under the table which turns the X-ray on and off.

**Monitor**  
Digital displays that clearly show high-quality images and data needed by the physician, updated in real time from up to 16 different sources at varied points of a procedure, including before and during the procedure. The monitor is highly interactive, similar to the cockpit of an airplane.

**Catheter**  
Enables clinicians to, for instance, insert a stent to open blood vessels in the heart or leg that may have been narrowed by plaque build-up. This will provide clear, real-time visuals on the monitor, enabling live-image guidance for clinicians to easily see and manoeuvre through vessels.

**C-arm**  
Moves around the patient to capture the required images in various angles and locations. It has the X-ray tube on one side and the detector on the other.

**X-ray tube**  
The tube below the patient generates X-ray beams. These are used to generate X-ray images of the patient's blood vessels. Contrast injections are used to enhance the quality of the pictures.

**Patient/Operating table**  
Comfortable bed, which the patient lies upon during the procedure. Easily moveable for flexibility during scanning.

**Touchscreen panel**  
Offers touchscreen and display capabilities at the table side to let the physician and staff control applications and the X-ray images, even with sterile gloves on. It has tablet-like features with functions to pan, zoom in, and process images.



**Control room**  
The control room is a room connected to the interventional suite. It has a wall-sized glass-window allowing the staff in the sterile procedure room to see and communicate with those in the non-sterile control room.

The control room has parallel monitors and controls to those in the procedure room, allowing staff here to also see the images and operate the interventional equipment. The control panel can communicate directly with the exam room to review live images or prepare and process another case. Clinicians in the control room can both prepare and view other parts of the surgery without entering the exam room. This reduces the need for sterility breaks.