



**PHILIPS**

Coronary Imaging

Interventional X-ray

# Making the difference with **Live Image Guidance**

## Dynamic Coronary Roadmap and StentBoost Live

With **Dynamic Coronary Roadmap** and **StentBoost Live**, Philips is once again revolutionizing live image guidance for percutaneous coronary interventions.



**Dynamic Coronary Roadmap** - automatic, real-time navigational guidance designed for procedure efficiency in complex PCI interventions without changing current standard workflow

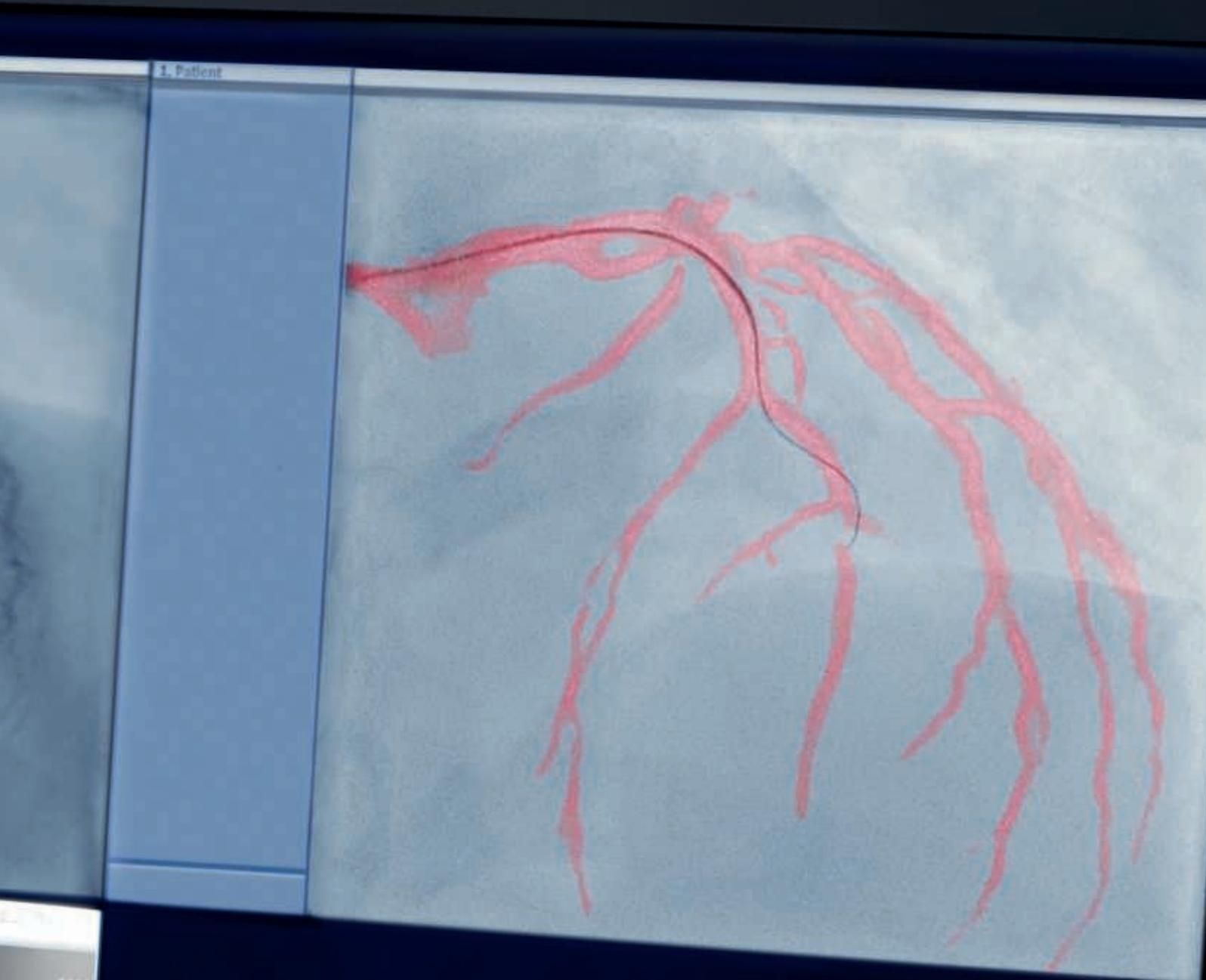


**StentBoost Live** - instantaneous enhanced live visualization, to position and deploy balloons, stents and bioresorbable vascular scaffolds, reducing overall procedure time

# Making the difference with **Philips Live Image Guidance**

At Philips our goal is not just to make better **Live Image Guidance** technologies, but to help treat patients better. We at Philips are proud that **more than 28 million patients per year are helped by one of our Image Guided Therapy technologies worldwide.**

Our **Live Image Guidance** innovative technologies integrate coronary X-ray, multi-modality imaging and patient information to support new procedures and intra-coronary device techniques. This delivers relevant clinical value where it's needed most – at the point of patient treatment. With real-time access to enhanced visualization and live navigation, interventional cardiologists can



decide, guide, and confirm the right therapy for the right patient with enhanced procedural effectiveness and greater confidence.

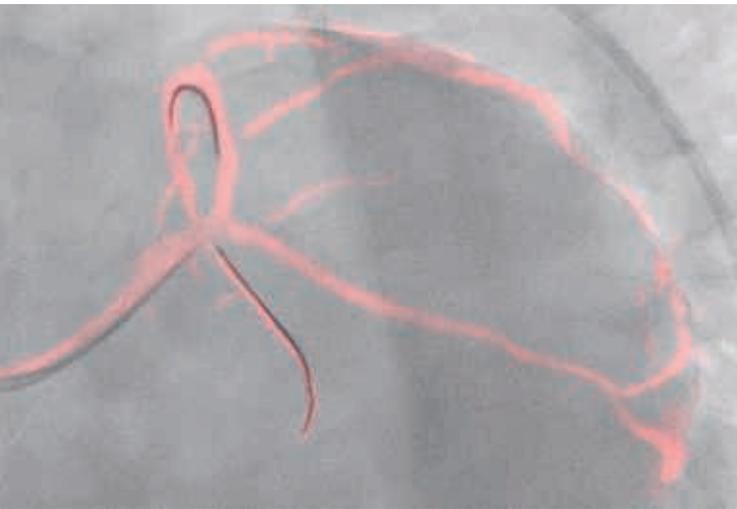
### **Real-time innovations built on Philips legacy**

With technologies like StentBoost, XperSwing, HeartNavigator and EchoNavigator, Philips is a pioneer in interventional cardiology imaging guidance solutions. Now we deliver two more groundbreaking innovations: **Dynamic Coronary Roadmap** for live anatomical guidance and **StentBoost Live** for real-time, enhanced visualization of stents, bioresorbable vascular scaffolds (BVS), and other devices.



# See clearly, guide confidently

## with Dynamic Coronary Roadmap



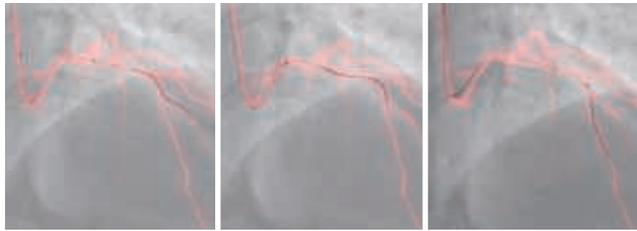
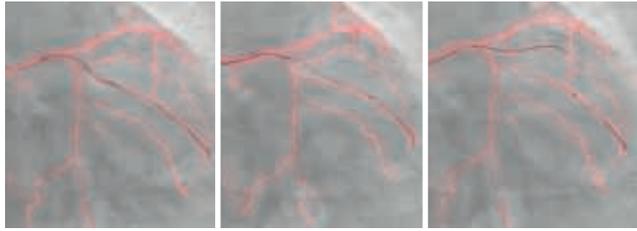
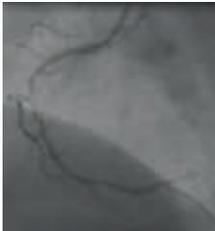
**Dynamic Coronary Roadmap**, a Philips-exclusive technology, creates a dynamic, motion-compensated, real-time view of the coronary arteries. The system overlays a highlighted coronary angiogram on a 2D fluoroscopic image, creating a colored map that adjusts automatically, providing continuous and specific visual feedback on positioning of wires and catheters.

### Key Benefits

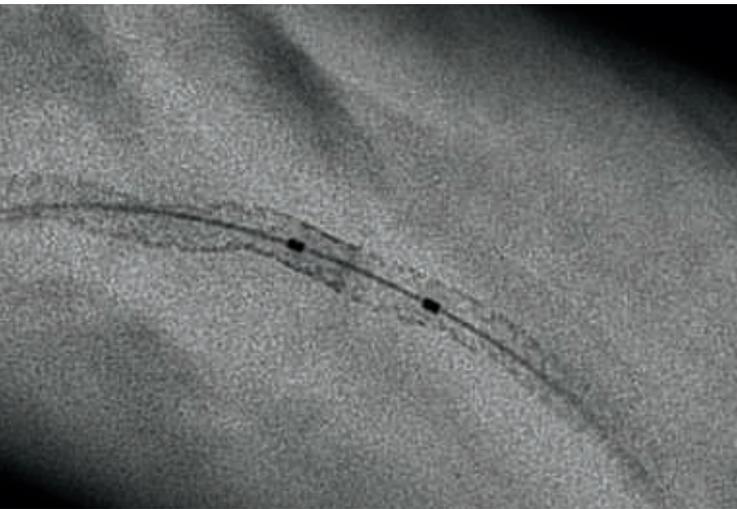
- Real-time, automatic, motion-compensated coronary imaging for guidance
- Navigate coronary arteries efficiently and with confidence
- Seamless integration into standard of care workflow and in daily clinical practice

**Dynamic Coronary Roadmap is a fully integrated system, featuring automatic storage and easy re-display of previously acquired roadmaps, to enhance procedure efficiency without changing the current workflow.**



	Clinical challenge	Solution
<b>Angioplasty of LAD with bifurcation lesion</b>	<p>A severe lesion is located at the mid-portion of the LAD, immediately distal to a large diagonal branch. Because of the complicated location of the lesion, the guide wire tracks down the diagonal branch instead of the LAD. Anchoring the wire in the LAD is required to provide enough stability to cross the lesion with the stent.</p> 	<p>Dynamic Coronary Roadmap enables the interventional cardiologist to immediately observe the incorrect placement of the wire. Using the real-time, motion-compensated navigation provided by Dynamic Coronary Roadmap, the interventional cardiologist can retrieve and selectively advance the wire to the correct vessel, in this case, without requiring additional contrast test injections.</p> 
<b>Wiring of both OM1 with tight ostial lesion and OM2</b>	<p>The insertion of two guidewires is required, the first one is anchored in the OM2. This creates difficulty in maneuvering the second guidewire down the OM1, due to narrow ostial stenosis and the natural track created by the first guidewire.</p> 	<p>Dynamic Coronary Roadmap is used to identify the specific location for the second wire, guiding its passage down the OM1. In this example, the interventional cardiologist can confidently rely on the seamlessly integrated workflow of Dynamic Coronary Roadmap, and without the need for additional contrast puffs in this example, quickly visualize and navigate to the area of interest within the coronary anatomy.</p> 
<b>Pre-dilatation of mid-RCA with subtotal occlusion due to ulcerated plaque</b>	<p>The balloon must be positioned within a subtotal occlusion. Standard procedure requires advancement of the balloon with the aid of small doses of contrast medium. However, the contrast only enables visualization of the proximal area of the coronary artery.</p> 	<p>Dynamic Coronary Roadmap provides a complete overview of the coronary artery, assisting the interventional cardiologist to confidently position the balloon over the stenotic lesion. In this case, Dynamic Coronary Roadmap delivers continuous feedback on device location, relative to the anatomy, the interventional cardiologist can efficiently navigate and manipulate devices with optimal visualization, eliminating the need for multiple contrast test injections.</p> 

# See clearly, stent confidently with StentBoost Live



## Key Benefits

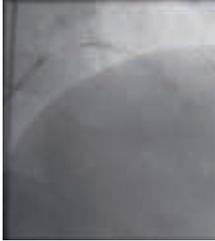
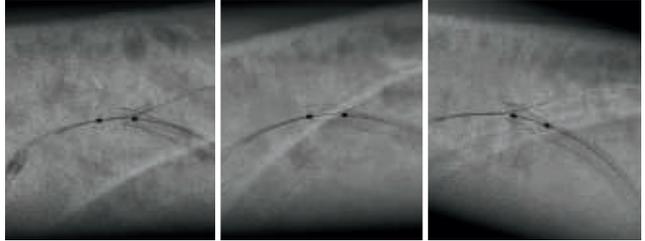
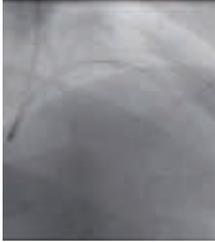
- Live enhanced visualization of device positioning and deployment
- Designed for procedural effectiveness and greater efficiency with enhanced visualization of moving intra-coronary devices
- Seamless integration into standard of care workflow for optimized PCI

When introduced over a decade ago, StentBoost revolutionized PCI procedure performance, making stent placement more efficient and minimizing the use of contrast in complex interventions. Now, **StentBoost Live** builds on that legacy of innovation and experience by providing enhanced, live visualization of stents and other devices during PCI procedures.

**StentBoost Live**, enhanced live stent visualization, is our most advanced technology to quickly verify positioning both before and after deploying balloons, stents, and BVS devices, to display under-deployed stents, and to confirm fully expanded stents.

**StentBoost Live features instantaneous processing, eliminating the need to wait for new images before stent repositioning.**



	Clinical challenge	Solution
<p><b>Post-stenting balloon dilation with a high pressure balloon</b></p>	<p>To avoid vessel injuries, a high-pressure balloon must be accurately placed within a stent. However, advances in stent design have made visualization of struts and stent edges more difficult, creating a challenge for accurate balloon placement.</p> 	<p>StentBoost Live is used to guide the high-pressure balloon to the proximal end of the stent. Continuous stent visualization confirms the placement of the balloon fully within the stent, may reduce the risk of vessel injury. Using StentBoost Live ensures that this type of complex PCI procedure is optimally performed.</p> 
<p><b>Positioning balloon across stent to open up jailed side branch</b></p>	<p>In stenting a coronary bifurcation lesion, it is essential to protect the side branch. Poor visualization of the stent hinders the positioning of the balloon for proper inflation and subsequent opening of the struts towards the side branch.</p> 	<p>StentBoost Live provides real-time images clearly showing the balloon position in relation to the deployed stent, allowing the interventional cardiologist to properly position the balloon to the proximal diagonal branch prior to dilation.</p> 
<p><b>Pre-deployment of overlapping stents</b></p>	<p>A second long stent must be deployed in the LAD, covering an extensive lesion proximal to another previously deployed stent.</p> 	<p>Using StentBoost Live, for real-time positioning, the overlapping stent in the proximal LAD is clearly visualized. StentBoost Live can then instantly display placement and successful deployment of the stent.</p> 

# Guiding tomorrow's innovation. **Today.**

Decide, guide, confirm with **Dynamic Coronary Roadmap** and **StentBoost Live**

With our innovative technologies, Philips and Volcano support interventional cardiologists **decide** on the optimal treatment options, **guide** devices to the correct position, and **confirm** the results with confidence.



## Decide

**How can I perform the procedure to achieve optimal outcomes?**

- **XperSwing** - a complete diagnostic cardiac angiogram in just two repetitions
- **iFR** - instantaneously measures trans-lesional pressure ratio during the wave-free period
- **Xper Flex Cardio** - integrated, real-time FFR measurement and full ECG capabilities



## Guide

**How do I navigate the device to the correct location?**

- **Dynamic Coronary Roadmap** - real-time anatomical roadmap for confident navigation
- **StentBoost Live** - real-time positioning of stents, balloons, and BVS devices
- **AlluraClarity with ClarityIQ** - industry-leading image quality at a fraction of the dose
- **iFR Scout** - pullback assessment of multiple lesions - without hyperemic agents
- **IVUS** - automatic measurements of lumen and vessel size, plaque area and volume, and the location of key anatomical landmarks



## Confirm

**How can I confirm that the device is correctly placed and deployed within the coronary anatomy?**

- **StentBoost Live** - instant confirmation of stent placement and deployment
- **IVUS** - interior view of the arterial vessel to confirm stent deployment

## Service and economic value

How can I drive efficiency and patient satisfaction?

In the highly competitive healthcare environment advanced capabilities can make you stand out. Our products and solutions provide economic benefits by making care delivery more efficient, minimizing system waste, and expanding patient access to solutions. The result? Enhanced patient, staff and medical satisfaction with an organization that is better equipped to handle current and future challenges.

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