



ZF Pharma & Health Summit 2014

30 Septembrie 2014

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Philips Romania

Philips Research Europe

100 years of delivering meaningful innovations



1918
Medical
X-ray tube



1919
Radio tube



1926
Pentode street lamps



1932
Sodium
street lamps



1939
Rotary
heads



1963
Compact
Cassette



1971
World's first
home VCR



1966
Local
oxidation



1976
NiMH
battery



1981
Compact
Disc



1992
Flat detector
for cathlabs



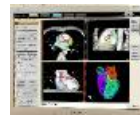
1995
UHP & low
Mercury TL/CFL



1996
High
resolution
MR



2002
Blu-ray



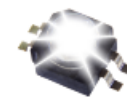
2003
Multi-slice
CT



2004
Ambilight
TV



2006
3D
displays



2008
Lumiramic



2010
Lumea



2010
Fall
Detector



2010
LumiMotion



2011
Digital
Pathology



2011
iCT
Scan



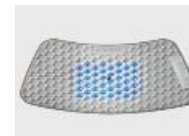
2011
Airfloss



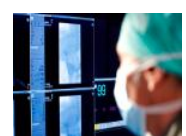
2011
FreeStreet



2012
Hue



2012
BlueTouch
Pain Relief



2013
AlluraClarity

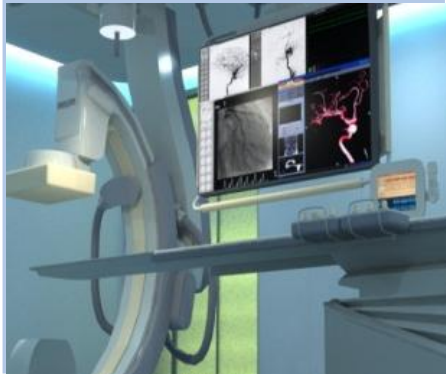
Philips: A strong diversified industrial group leading in health and well-being



A strong diversified industrial group leading in health and well-being

Philips

Healthcare



43%

Consumer Lifestyle



20%

Lighting



37%

We're getting older and sicker

By 2050, 50% of the developed world is projected to be chronically ill



The rate of change is accelerating

Innovation introduces both complexity and promise



Demand for care is growing

There are simply not enough (qualified) nurses and doctors to cope with our growing (and aging) population. Rising healthcare costs are unsustainable.



Aspirational innovation goals derived from grand societal challenges



Obesity



Access to care



Cancer

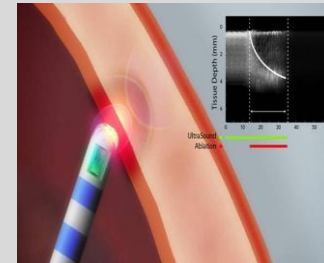


Cardiovascular



Ageing society

Grand societal challenges: Where can we make a difference?



Our aspirations: Where do we want to win through meaningful innovations?

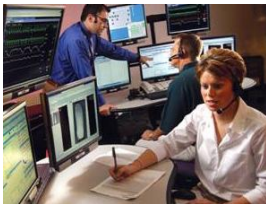
Transforming care – today and tomorrow

Today



Imaging

Early and confident diagnosis



Clinical IT

Right information at the right time



Lifecycle services

Optimising your equipment and training your staff



Home Healthcare

Improving the quality of life for at-risk patients in the home

Tomorrow



Image guided intervention and open source approach

Advanced visualisation while helping minimize patient side effects.



Clinical Decision Support

Tools based on an understanding of disease pathways and user insights



Partnership solutions

Customised services and healing environments for improved efficiency, staff performance, and patient care



Care everywhere

Monitoring and management, wherever a patient goes

Challenge: Rapid rise of cardiovascular diseases

Today, 30% of all global deaths are caused by CVD

By 2030, about 24 million people will die from CVD

Estimated annual cost of CVD 310 B€ (US), 169 B€ (EU), 31 B€ (China)

Electrical signal disorders

Atrial fibrillation
Sudden cardiac arrest

Valve problems

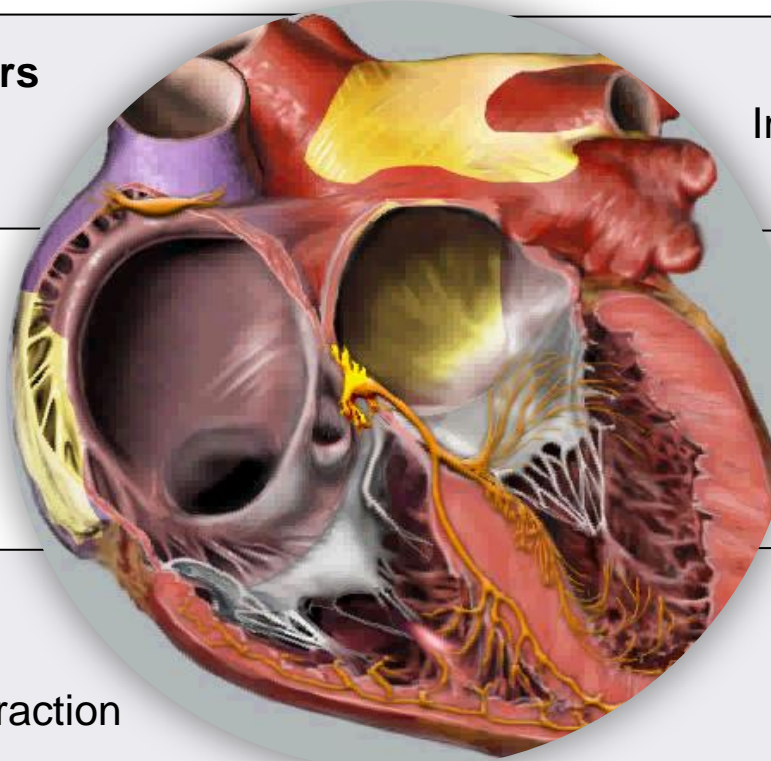
Inefficient blood circulation

Blockage of Coronaries

Damage of myocardium
Insufficient power for contraction

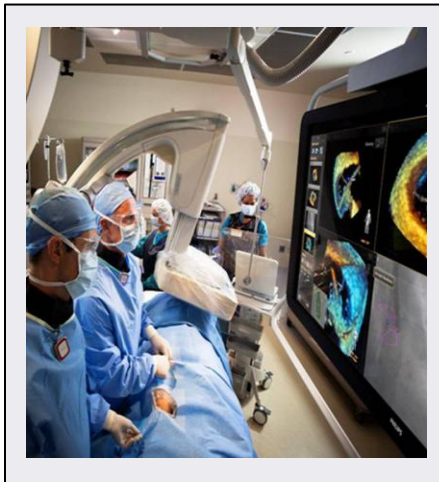
Damaged myocardium

Insufficient contraction
Insufficient output



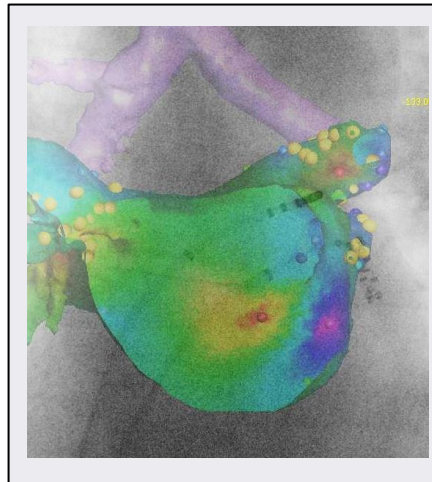
Our solution: First time right minimally-invasive cardiac procedures

IGIT solutions for cardiology procedures enabling safe, cost-effective cure



Interventional Imaging

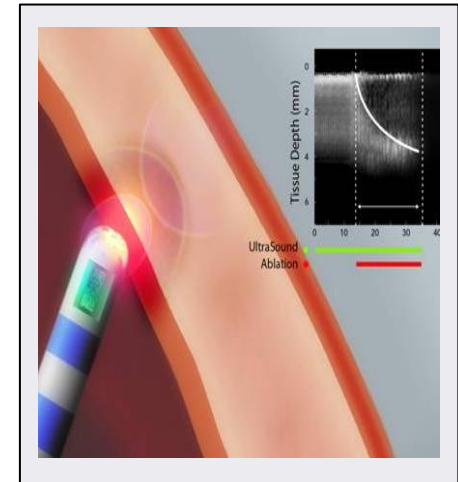
- Ultra low dose 3D X-Ray imaging
- Sharp images through noise reduction algorithms
- 3D real time Ultrasound Imaging



Workflow integration

Real-time visualization and guidance for catheters

- Heart navigator for valve replacement
- EP navigator for ablate treatment of atrial fibrillation
- EchoNavigator for mitral valve repair



In-body sensing and imaging

- Cardiac ablation depth monitoring for EP via ultrasound transducers integrated on catheter tip
- Real time 3D shape sensing with optical fibers

Clinical Need



<60%

First time success rate



1-2%

Patients treated with
catheter ablation

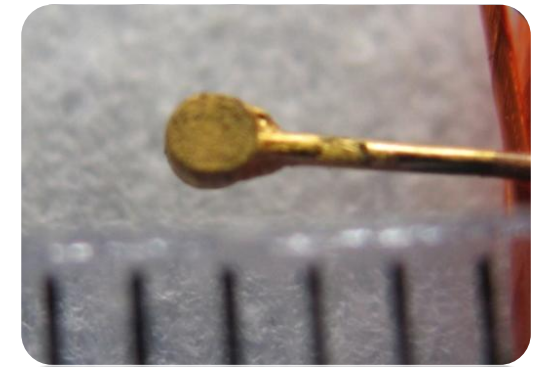
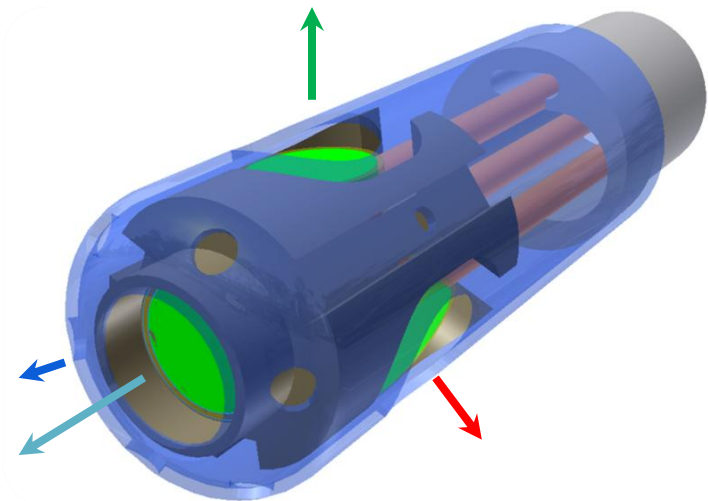
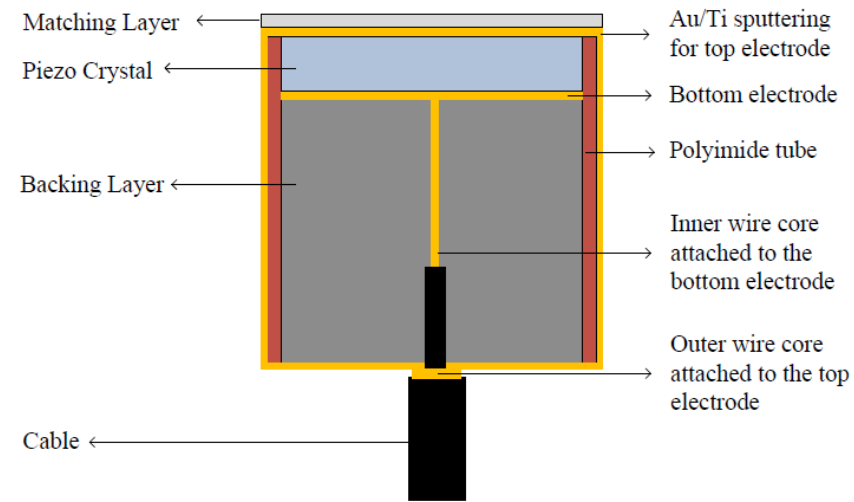


\$26 Bn

Additional costs due to
Atrial Fibrillation
patients

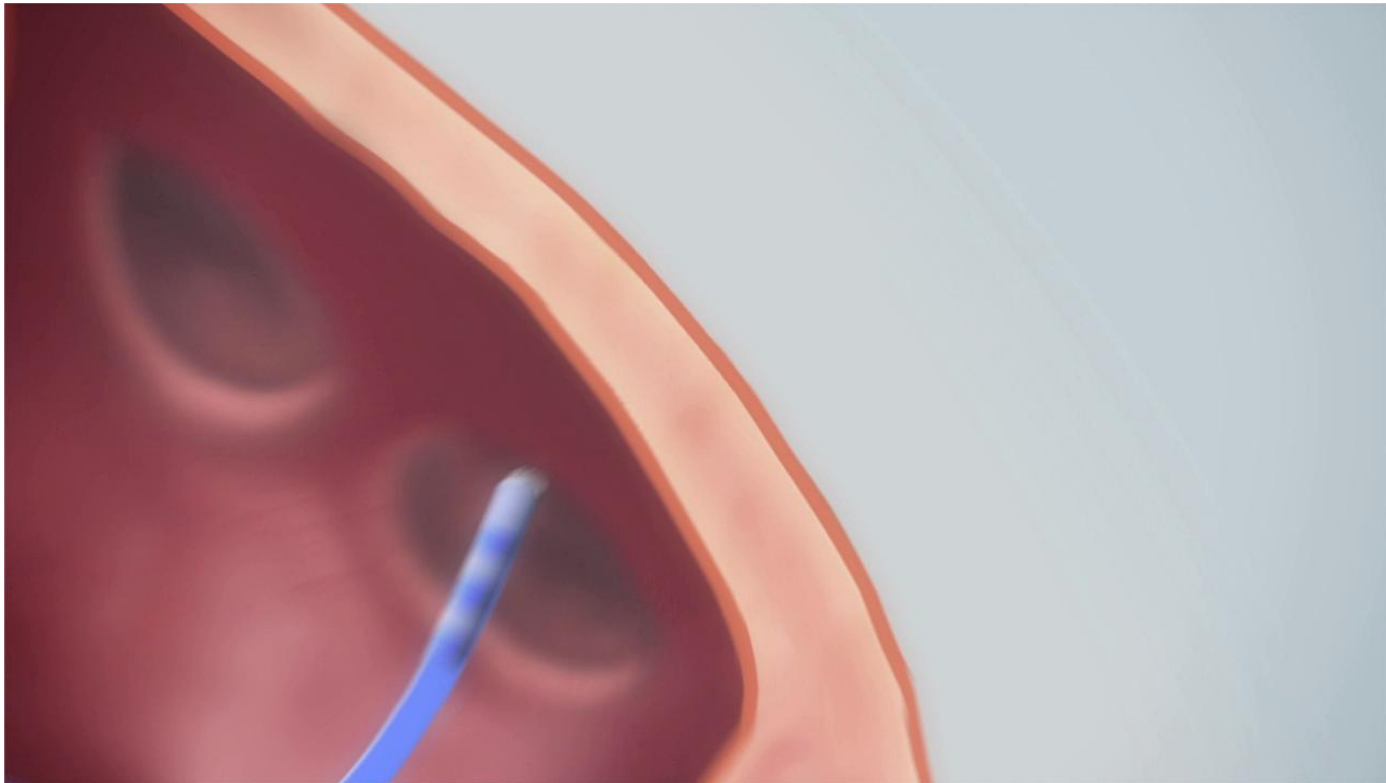
Device Miniaturization

- Miniaturized Ultrasound Transducers
- Catheter prototypes built with four individual transducers to image cardiac tissue in any orientation



Ultrasound Imaging Expertise

Image processing enabling the physician to see treatment efficacy with the blink of an eye



Challenge: rapid rise of cancer

Cancer is a leading cause of death worldwide

*By 2030, about 13.1 million people per year are estimated to die from cancer. Economic toll for cancer is still increasing (\$895 billion in 2008 excluding direct medical costs)
(source: WHO)*

Physical, mental and social impact on patient

Call for effective treatment with minimal side effects

Focus on prevention

Screening for earlier detection and better chance of survival

Rapid rise of medical and societal costs

Earlier and more effective treatment

Guidance in treatment

Personalized approach, before, during and after therapy



Image-guided intervention & therapy



SEE

Imaging

Procedure planning

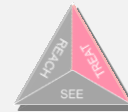
Image guidance of treatment



REACH

Catheters, needles

Navigation/robotics



TREAT

Therapeutic devices and systems

Our Aspiration:

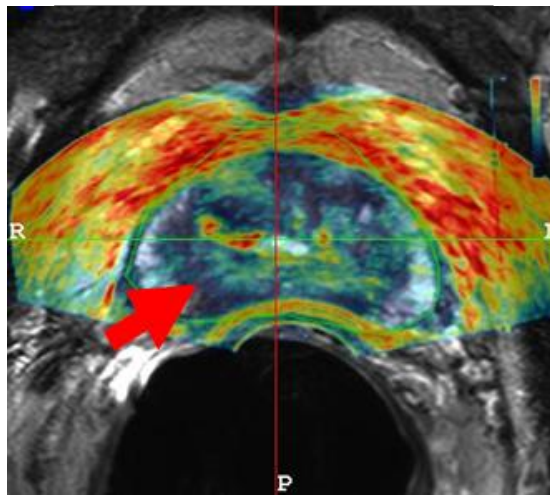
IGIT solutions for precise cancer diagnosis and treatment

Providing better outcomes with radically reduced side effects



Diagnostics and Prognostics

- Improved imaging systems to enable clinicians to better read and interpret images and make an initial diagnosis
- Integration with other sources of information, e.g. pathology



Therapy planning

- Image segmentation and multi-modal technologies to provide contextual information
- Imaging to guide interventional therapy, minimizing collateral damage
- Radiotherapy planning: dose painting



Image-guided treatment

- Image-guided interventional and focal therapies
- MR-Radiotherapy, eg MR-LINAC
- MR-HIFU

MR guided **H**igh **I**ntensity **F**ocused **U**ltrasound

1. Non-invasive thermal tumor therapy
2. MR guided: treatment planning based on 3D MR images
3. Focused Ultrasound heats tissue non-invasively through intact skin
4. MR controlled treatment: real time temperature imaging



Philips Sonalleve MR HIFU system

Sonalleve creates value for the patient

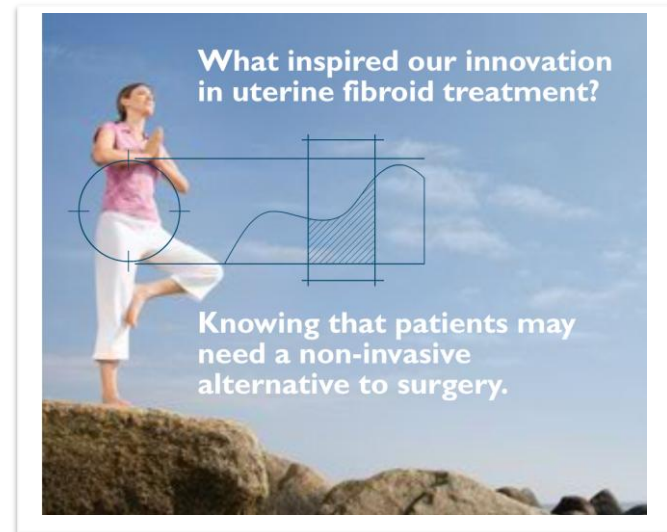
Uterine fibroids, a benign tumor affecting 70-80% of women by age 50*

Non-invasive low pain
alternative to surgery

Out-patient procedure
Go home the same day

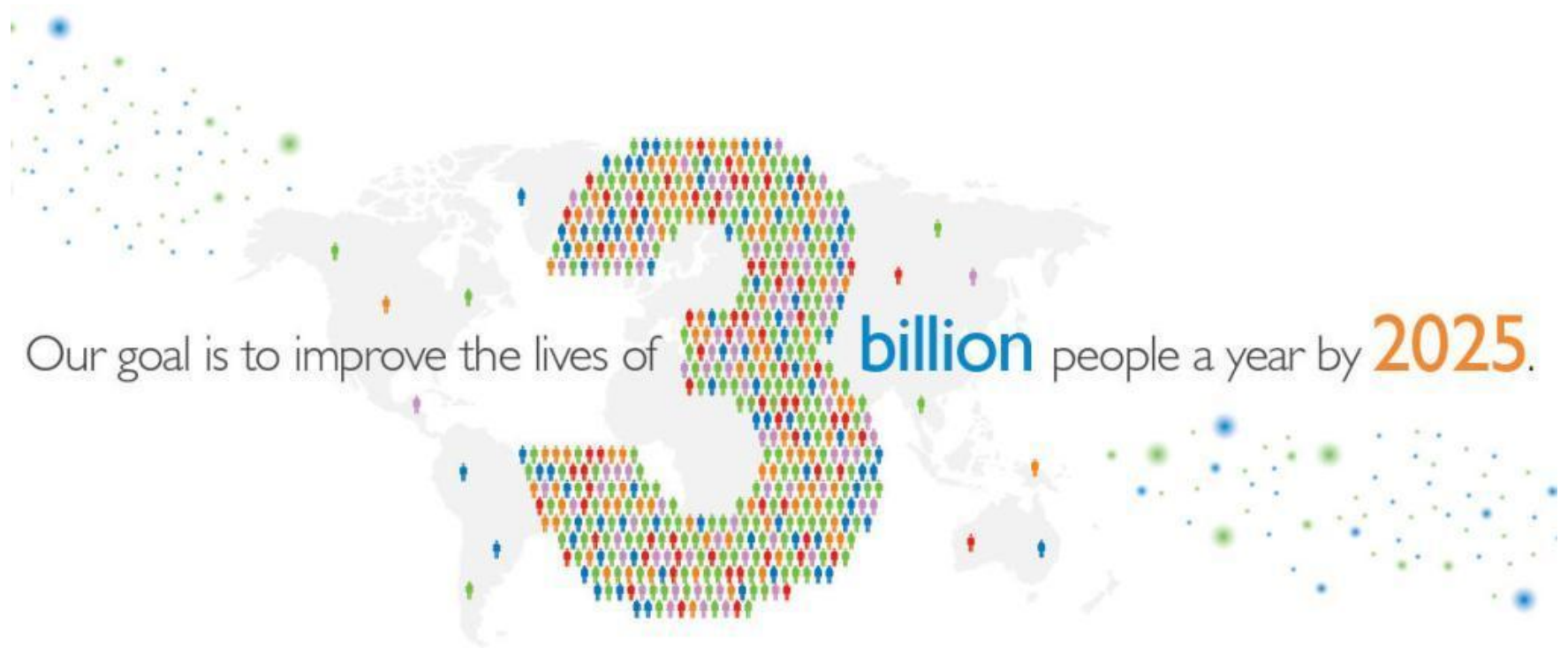
Quick recovery: Return
to normal activity in 2 days

Uterus preserving therapy
Future pregnancy promising



*Source: AHRQ Publication No. 07-E011: Management of Uterine Fibroids: An Update of the Evidence.

At Philips we strive to make the world healthier and more sustainable through innovation



Improving people's lives through meaningful innovation

