Trusted partner for 1 out of 2 hospitals worldwide

Agfa HealthCare

At a glance…
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Vision & Mission

- **Vision**
  - *A world where all healthcare professionals can provide superior care for their patients through the synergies of imaging, information technology and clinical knowledge."

- **Mission**
  - Making our customers successful:
    - by enabling them to deliver quality of care while capturing efficiency gains.
    - by providing timely access to the right information and intelligence.
    - by supporting their journey towards integrated care.
  
  - Being their strategic partner of choice:
    - by consistently delivering high value.
    - by providing quality medical imaging and information technology solutions and services.
    - by building on good practices and experiences from each market served.
Introducing Agfa HealthCare…

Driving medical imaging & healthcare IT innovations

Watch the video on YouTube!
Agfa HealthCare
Agfa HealthCare

Revenue
€ 1.07 Billion

Employees
4500+

R&D
9.1%
€ 97 Million

Sales Offices & Reps.
100+
Turnover Analysis

- Analog Film: 9%
- Hardcopy: 31%
- Digital Radiography: 20%
- Imaging IT: 26%
- Hospital IT: 14%

Total: 60% + 40%
1 out of 2 Hospitals WW use our Solutions

Radiology
Digital Radiography

Top 3 in the World
>50,000 CR & DR devices

Radiology
RIS / PACS

Top 3 in the World
> 2700 PACS installs

Radiology
Film & Print

Number 2 in the World
> 55,000 DRYSTAR medical imagers installs
1 out of 2 Hospitals WW use our Solutions

Enterprise Imaging IT
Leading
220 datacenters & regional networks

Enterprise Content Management
Leading
Installed in more than 400 hospitals

Hospital IT EMR / EHR / Portal
Nr. 1 in Europe
> Installed in more than 1300 hospitals
Healthcare: The Economic Environment

- Healthcare budgets are continuously under pressure
  - Focus on: ROI, TCO, Financing, Managed Services,…
  - Health IT considered crucial to increase productivity, efficiency, patient engagement,…

![Health-Care Spending as Percent of GDP](chart.png)
Although the health spending growth rate is slowing, it still continues to be a disproportionately large part of the US economy.

Year-over-year growth in national health expenditures adjusted for inflation and % of total GDP.
Healthcare: The Economic Environment

*Healthcare spending growth rate for 2016 is 6.5%*

HRI’s projected medical cost trend over the years

Healthcare: The Economic Environment

- Healthcare budgets will be even under more pressure
  - Aging of the population -> The “silver” economy

By 2050, the number of people aged over 60 years is projected to be five times that in 1950 (credit: Luigi Fontana, Brian K. Kennedy, and Valter D. Longo/Nature)
Healthcare: The Economic Environment

- Healthcare data tsunami, research firm IDC predicts an exponential increase in healthcare data:
  - 2013: 153 Exabyte's
  - 2020: 2,314 Exabyte's
Our Vision…

- “A world where all healthcare professionals can provide superior care for their patients through the synergies of imaging, information technology and clinical knowledge.”
  - Radiology
  - Enterprise Imaging
  - Hospital IT
Radiology: The Challenges

- Eliminate chemistry by going digital
- Lower dose & better image quality
- Budget pressure for investments
- Reduce operating costs
- Shorter patient waiting times
- Increase productivity & uptime
- Rapid & accurate diagnose
- Clinical Productivity & collaboration
- Provide physicians & patients instant access to images & protocols
- Data back-up & security
Radiology: Eliminate Chemistry & Go Digital

Special programs to accelerate the conversion from “wet” to “dry” film with more than 55,000+ DRYSTAR imagers already installed.
Radiology: Eliminate Chemistry & Go Digital

Affordable digital radiography (CR & DR) solutions -> installed base of 50,000+

CR 10-X
CR 12-X
CR 15-X
CR 30-Xm
DX-M
DR Retrofit
DX-D 100
DX-D 300
DR 400
DX-D 800
DR 600
DR 400

AGFA HealthCare
New generation DR detectors

- Wide range of applications @ lower dose for Cesium detectors
  - DX-D 40/DX-D 45/ DX-D 60
  - Empowered with Gold Standard MUSICA Image Processing
  - High resolution for Neonatal, Pediatrics, Rheumatology,…

*Testing with board certified Radiologists has determined that Cesium Bromide (CR) and Cesium Iodide (DR) Detectors when used with MUSICA processing can provide dose reductions between 50 to 60% when compared to traditional Barium Fluoro Bromide CR systems. Contact Agfa for more details.*
Radiology: Benefits of DR are Clear

- Improved workflow and reduced examination time
- Immediate verification of patient positioning and image quality
- Improved accuracy of patient identification
- Potential of dose reduction with Cesium detectors.

- Most importantly: Increased Patient Satisfaction
Radiology: Dose Reduction

Sample of study results

Entrance Surface Dose (ESD) required for a 23 cm chest. The Agfa HealthCare DX-D 300 DR system required 45% less dose than competitive DR System B and 27% less dose than competitive DR System A.

Agfa HealthCare DR with Cesium detector required 45% less dose(*) than competitive DR System B and 27% less dose(*) than competitive DR System A.

(*) (Entrance Surface Dose (ESD) required for a 23 cm chest)
Radiology: Dose Reduction

It is of the upmost importance to us that children requiring X-rays are exposed to radiation doses as low as reasonably achievable, while also providing images of excellent quality,” commented Sanya Tyler, Radiology Services Manager, Children’s National Health System. “Agfa HealthCare’s DR with MUSICA enables us to deliver these extremely important benefits to our patients.
Radiology: Dose Reduction

"We decided to introduce the DX-D 100 from Agfa HealthCare. We opted for a cesium iodide (CsI) detector, which we anticipated could be operated with a 30% to 40% lower dose. It is linked into the hospital’s network by WLAN, so images are available immediately after exposure."

PROF. DR. REINHARD LOOSE
Radiologist, Klinikum Nürnberg Nord, Nürnberg, Germany
Radiology: Dose Reduction

How our company contributes to radiation protection
Agfa HealthCare

Towards safer imaging in neonatal & paediatric radiology
Radiology: Dose Reduction - Cesium Detectors

Dose\(^*\): 191.9 µGy

-56%

Dose\(^*\): 83.65 µGy

\(^*\) Entrance Skin Dose (ESD)

*Testing with board certified Radiologists has determined that Cesium Bromide (CR) and Cesium Iodide (DR) Detectors when used with MUSICA processing can provide dose reductions between 50 to 60% when compared to traditional Barium Fluoro Bromide CR systems. Contact Agfa for more details.
Radiology: Dose Reduction - Cesium Detectors

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Radiology: Dose Reduction - Education

- Today, only **1 out of 50 patients** (*) receives already the lower dose:
  - Access ($!) to the technology (Cesium, image processing, ...)
  - Education, training & awareness

(*) Agfa HealthCare internal estimate
Radiology: Dose Reduction - Education
Life is sweet
We monitor each radiation dose with great care
Radiology: Image Quality

1895

Now
“When we showed the radiologists the new version of MUSICA, they often got used to the new image presentation very quickly! ‘Once you appreciate that level of detail’, they said, ‘there’s no going back’.

PIET VUYLSTEKE
PhD, Senior Researcher, Agfa Healthcare
Radiology: Image Quality

AGFA HEALTHCARE IMAGE PROCESSING AROUND THE WORLD

Radiologists around the world rely on digital image processing for their diagnoses. This is the scale on which MUSICA, the Agfa HealthCare image processing software, is used daily, globally.

50,000
TOTAL MUSICA INSTALLATIONS ON CR AND DR UNITS

+5TB
BYTES OF MUSICA DIAGNOSTIC INFORMATION PROCESSED PER DAY

+4,000 HOURS
DIAGNOSTIC READING PER DAY WITH MUSICA

+1,000,000
MUSICA IMAGES READ PER DAY

THE MUSICA SCALE

AGFA
Agfa HealthCare
Radiology: Image Quality

Standard image processing

MUSICA image processing
Radiology: Image Quality

Standard image processing

MUSICA image processing
Radiology: Budget, TCO, Productivity

- Agfa HealthCare: “your digital imaging partner for life”
  - “FF” is a suite of upgrade, trade-up and retrofit programs to protect your investments and keep your systems up-to-date
  - “FF” supports your continuous efforts to improve productivity, efficiency and image quality while reducing dose further.
Radiology: Budget, TCO, Productivity

Our goal was to improve productivity and profitability. It is important for us to invest in technology, but we must see a return on that investment.

DR. EO CHIA LIN
Administrative Superintendent
Hospital e Maternidade SinoBrasileiro, Osasco, São Paulo, Brazil

Hospital e Maternidade SinoBrasileiro goes direct digital with DR Retrofit, taking a big step on its continuing path as a reference in excellence.
“With our previous equipment, each exam took five minutes; now, with the DX-D Retrofit, an exam is complete in just one minute. When you multiply that time savings by 200 daily exams, the improvement is considerable.”

DR. LUIS FELIPE URIZA CARRASCO
Head Director of Radiology, University Hospital San Ignacio, Bogotá, Colombia
Radiology: Budget, TCO, Productivity

The advantages of Digital Radiography (DR) - Loma Linda University Medical Center

- **67%**: 67% more exams per day for increased productivity
- **8,160**: 8,160 minutes time savings on average per exam
- **50%**: Up to 50% dose reduction
- **9**: 9 more patients per day
- **3,285**: 3,285 more patients per year
- **100%**: 100% Full Time Equivalent gain, the number of technologists required per exam is reduced from 2 to 1
Radiology: Budget, TCO, Productivity

Watch the video on YouTube!
Contrast Media: Imaging Agents(*)

- Our passion is imaging excellence
- Imaging Agents by a world leader in Radiology, recognized in the medical community as a key player and expert in diagnostic imaging

The availability of magnegita, dotagita, iopamigita, iohexagita is subject to local registration with the authorized bodies in the respective countries.

(*) Not available in US & Canada
Enterprise Imaging: The Challenges

- Deliver cost-effective image management centralization
- Improve access and exchange of multi-speciality images
- Facilitate second opinions and collaboration
- Reduce exam duplication and data loss
- Speed up treatment with shorter turn-around
- Less waiting time, more time with the patient
- Reduce the length of patient stay
- Lower costs by consolidating IT infrastructure
- Increase efficiency and production
- Increase billable services
Enterprise Imaging
Enterprise Imaging: The Challenges

- Optimize Workflow
- Enable Collaboration
- Empower Through Intelligence
- Enhance Data Management
Enterprise Imaging: The Challenges

Images are managed in separate silo’s

Radiology

Cardiology

NucMed

Other ‘ologies’
Enterprise Imaging: The Challenges

Images are managed in a consolidated platform

Radiology

Cardiology

NucMed

Other ‘ologies’
Enterprise Imaging: The Solution

From departmental silos to the care-centric enterprise wide workflow model

Radiology

Cardiology

VNA

Mobile & Web

http://www.visualhealthcare.com
Enterprise Imaging: The Solution

...Spanning across multi-specialty care settings
Radiology, Oncology, Cardiovascular, Ophthalmology, Dermatology, Obstetrics, Wound Care, etc...
Enterprise Imaging: “XERO - Anywhere, Anytime”

- Zero download viewer
  - Reduces IT complexity

- Approved for
  - Diagnostic image access

- Facilitates
  - Clinical collaboration and Mobility

Viewing clinically relevant imaging data from any specialty on a consolidated platform results in cost savings and supports more informed care decisions
Enterprise Imaging: “XERO - Anywhere, Anytime”

Watch the video on YouTube!
Enterprise Imaging: “XERO - Anywhere, Anytime”

Full Fidelity Viewing (option)
- 510K cleared
- Mobile diagnostic image access for not only Radiologists but Clinicians as well
- Improved clinical decision making

Patient-centric timeline view
- Chronologic view of patient record with a patient-centric viewer
- Improve collaboration during MDTs
- Quick and easy access to imaging

Enterprise DICOM ECG viewing (option)
- Expand ECG viewing to departments outside Cardiology
- DICOM 12 and 15 Lead Resting ECGs
- Display PDF ECGs
Enterprise Imaging: “XERO- Anywhere, Anytime”

One List

One Web Viewer

One Patient Record

AGFA Healthcare PACS

Third Party PACS

PACS Images

AGFA Healthcare VNA

Third Party VNA

Public or Private Network

XERO Exchange Network

XERO PACS

Agfa VNA

XERO

3rd Party PACS

3rd Party VNA
Enterprise Imaging: “Vendor Neutral Archive”

- Integrated VNA consolidating images from multiple departmental PACS
- Support for multiple patient ID domains
- Business Intelligence offering study volume reporting

Sharing images within the enterprise
Enterprise Imaging: “Vendor Neutral Archive”

- Support millions of studies/year
- Supports IHE XDS-I
- ILM (Information Life cycle Management) for study purge and study protect
- IOCM as Study Manager
- Synchronization with 3rd party PACS

Sharing images within the region
Enterprise Imaging: Patient Care

- **95%** Faster Image Access: Time needed to find an image could be reduced by 95%.
- **75%** Reduced Turnaround Time: 24/7 cross facility exam reading, resulting in 75% increase in report turnaround time.
- **60%** Faster Data Exchange: Image transfer for acute trauma takes just minutes instead of hours.
- **5%** Shorter Hospital Stay: 5% shorter hospital stay can be achieved due to immediate availability of results, better collaboration and faster diagnosis.
- **1-2%** Less Examination Retakes: Decrease in examinations retakes from 5% down to 1-2%. This could result in dose reduction.

Findings from a qualitative study conducted by HIMSS Europe™
Enterprise Imaging: Workflow

- **10% More Patients**
  More efficient workflow resulting in 10% increase in patient volume within a period of 2 years.

- **Patient Satisfaction**
  More efficient workflows and access to patient history allow the radiologist to spend more time with patient and clinicians.

- **Mobile Access**
  Anywhere access to images and reports, even on a mobile device with a low bandwidth Wi-Fi connection.

- **75% Turnaround Time**
  With the Enterprise Imaging suite, our turn-around time for images and reports is reduced by 75%.

- **Staff Satisfaction**
  Staff satisfaction went up a lot because the anywhere, anytime access offers the physicians the ability to work remote when on call.

Findings from a qualitative study conducted by HIMSS Europe®
Enterprise Imaging: ROI

10% Consolidated IT Platform
10% savings realized over a period of 2 years by reducing licensing, EMR integration and maintenance costs.

100% Data Archiving
100% digital image archive
No extra staff is needed anymore.

20% More Productivity
Productivity grew by 20% in the first 6 months due to high availability, performance and better image access.

2% New Billable Services
2% more billable services as center of expertise, providing better collaboration and second opinion between different hospitals.

98% Less Consumables
Film purchases dropped by 98%.

Findings from a qualitative study conducted by HIMSS Europe.
Enterprise Imaging: in more than 30(*) countries around the world

Modern IT platform helps maximize performance

Designed for Clinical productivity

Improve diagnostic confidence

+140 VNA installs
Agfa HealthCare Enterprise Imaging VNA provides multi-vendor consolidated storage and helps reduce data ownership and migration cost.

+510 XERO Viewer installs
The XERO Viewer lets you and other caregivers access the patients’ images and reports in a single browser-based view, including on mobile devices.

+210 Radiology installs
Next generation medical imaging platform that trully combines workflow, image management, reporting and clinical applications into one consolidated platform.

Image-enable your EHR
Seamlessly integrating XERO Viewer with your EHR

With greater context for image and text data, you can make more informed assessments and more confident care decisions.

(*)sold, in deployment and implemented sites
Hospital IT

Sorting medical records in the 1990s
(Source: Cleveland Clinic)
Hospital IT: Electronic Medical Record

New @HIMSSAnalytics study finds #EMRs have measurable, positive impact on #patientcare ow.ly/zLuL2
Hospital IT: The Challenges

- Today, ever increasing expectations, tight medical budgets, more advanced clinical treatments and a growing need for improved communications is increasingly putting public and private health providers under pressure.

- Hospitals need to transform medical and financial data quickly into information that can facilitate decisions and reduces documentation effort.
Hospital IT: The Challenges

- The hospital market in industrial countries faces challenges and new demands due to aging populations, changing disease spectrum and advances in medical science.

- Hospital has to respond to raising patient expectations and the rapid technological development.

- Severe cost containment measures were seen during the last decades, resulting in health care reforms especially in the hospital sector.

- In Europe, hospitals are forced to reduce the length of stay of the patients and to provide transparency to ensure adequate reimbursement of their delivered services. The pressure to optimize and restructure is evident.

- In emerging countries like Brazil, the challenge is in consolidating the health care system to reduce the cost.
Hospital IT

- Germany/Switzerland/
  Austria/Luxemburg
- Belgium
- UK
- France
- Brazil

Languages:
- English
- Dutch
- German
- French
- Portuguese
Hospital IT

Over 1000 hospitals in 7 countries
500,000 daily users
1,000,000 daily patient visits

Europe

DACHL
France
Belgium
UK
Hospital IT

- ICU
- Nursing
- BI & Statistics
- CPOE
- Emergency
- Coding
- Semantics
- Appointments
- Medication
- Content management
- Decision support
- Patient Admin
- Customized Content
- Security
- Speech integration
- Mobile Edition
Hospital IT: Mobile Solutions

Information at the point of care

Access

- “anywhere, anytime”

Information

- At the point of care

Facilitates

- Patient outcomes
Hospital IT: Patient Administration

the gateway to all patient data

ADT

- Access all patient information

Compliant with patient

- Privacy & confidentiality

Facilitates

- Patient management
**Hospital IT: ICU-Manager**

*Fully digitized management system for the intensive care unit*

- **Structured, digitized**
  - Care documentation
- **Improves**
  - Reimbursement flows
- **Enhances**
  - Patient care
Hospital IT: Emergency Management

*managing emergency departments*

“Optimize unplanned patient intake and generate high quality documentation from the first moment"
Hospital IT: CPOE
computerized physician order entry of lab and imaging orders

To facilitate EMRAM stage 2 to stage 4 progression:
• 2: major ancillary systems feed into clinical data repository
• 3: First level clinical decision support to conduct error checking with order entry
• 4: CPOE extended into evidence based medicine protocols
Hospital IT: Medication

IT and science for a better life

"The offered multiple processes around drug prescription, bring comfort and safety into daily life."
Hospital IT: Nursing

*the most important things first*

“A dedicated nursing workplace to be able to act on patient and non-patient related tasks with indicators for urgency”
Hospital IT: Appointment Management

multi-resources planning for the enterprise

“The impact of smart scheduling solutions on hospital resource efficiency can be enormous: time and money can be saved, together with increased staff satisfaction and patient safety.”
Hospital IT: Coding and DRG

every activity reimbursed

Health care systems worldwide will adapt DRG systems.
Hospital IT: Business Intelligence & Statistics

hospital reality in a dashboard

"Enables to view and control all quantifiable data, serve legal export requirements, create controlling reports and inspect causalities."
Hospital IT: Security

Complex security tools help to provide the necessary information to the right people at the right time, with respect to patient’s data privacy.
Hospital IT: Semantics

make health care machine interpretable

"If we want to share data, we will need to use an international terminology"
Hospital IT: Clinical Decision Support

transform big data into smart data

"With all this data in the systems, how can we use it for better delivery of care?"
Hospital IT: Alerts

use information for safety

"ORBIS Alerts is the system’s watch-dog. Less incidents and higher quality of care."
Hospital IT: Synopsis eXtended (SYNX)

multi-patient dashboards

“A clinical dashboard with the information I need to see. Configurable to my needs.”
Hospital IT: Speech

fully embedded voice recognition

"Integrated speech recognition across all modern platforms, including mobile devices"
**Hospital IT: Enterprise Content Management**

**Quote:**

"HYDMEDIA is to ORBIS what Google is to the internet, providing fast access to a high-performance search tool.

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**Statistics:**

- **150 files** are sent back down to the archives every day now, **versus 250** before 2012.
- **90%** of the hospital practitioners acknowledge a **time savings** and an ergonomic access to information.

**Time Comparison:**

- **4 seconds** are needed to access information.
- **3 minutes** are needed to fill in the documents for a newborn baby, **versus 25** in the past.

**Case Study:**

Hospitals CH de Saint-Lô and CH de Coutances speed up and secure access to information by dematerializing all patient files and "fossilizing" paper archives.
Hospital IT: Agfa HealthCare Portal

A gateway to integrated care
Hospital IT: Agfa HealthCare Portal

A gateway to integrated care

For the Patient

• View your images via Viewer, (lab) results and clinical notes
• Share results securely with a physician
• Upload images and documents

For the Physician

• Access to images, lab results and notes
• A work list with an easy overview of all patients
• Secure peer-to-peer communication with other providers
Services: The Challenges

- Hospital environments need to focus on their core business so increasing need to outsource some solutions such as IT systems, infrastructure, equipment, …

- IT Departments:
  - More limited budgets, to combine with higher requirements on functionality and serviceability of the solutions -> need a higher degree of control, uptimes, service quality, follow-up, …
  - IT Security, system availability & stability and System accessibility whilst reducing TCO while improving the quality of services

- Radiology departments:
  - Workflow improvements (produce more with less) as well as the need to increase productivity

- C-suite (Financial mainly):
  - Smaller budgets that limit the chance to renew systems and solutions, whilst the health organizations are required to provide same clinical services, with even improved quality.
Services: The Challenges

- Cloud Services:
  - Customers are looking for solutions without investments up-front which are totally Cloud based
- Mobile use:
  - Solutions must support mobile devices and even following BYOD policies which offer a more complex environment to manage
- Big data resulting in growing data archives
Services: The Challenges

A solid feeling of confidence
Agfa HealthCare Global Services
delivered by 1900+ highly engaged employees

+1900 highly engaged services employees
+35 countries where we are present
+480 customers served every day
Services: Global Remote Incident Prevention

Bringing peace-of-mind to the radiology department

Agfa HealthCare Global Remote Incident Prevention (GRIP) monitors and helps prevent incidents before they occur.

24 hours a day, 7 days a week, 365 days a year
Services: Global Remote Incident Prevention

Customer Case: AMC HOSPITAL, AMSTERDAM, THE NETHERLANDS

Global Remote Incident Prevention services bring peace-of-mind to radiology department

GRIP increases uptime levels and reduces patient care delays

“"It brings a peace-of-mind that incidents will not affect our end users.”

DR. ANNETTEBA, Manager of Radiology and Nuclear Medicine
Trusted partner for 1 out of 2 hospitals worldwide

Agfa HealthCare

At a glance…