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# **Request for Reconsideration after Final Action**

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USPTO-GENERATED IMAGE	YES							
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ARGUMENT(S)								
Please see the actual argument text attached	d within the Evidence section.							
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RESPONSE SIGNATURE	/allison z gifford/						
SIGNATORY'S NAME	Allison Z. Gifford						
SIGNATORY'S POSITION	Attorney for Applicant, PA Bar Member						
SIGNATORY'S PHONE NUMBER	610 640 5800						
DATE SIGNED	11/14/2018						
AUTHORIZED SIGNATORY	YES						
CONCURRENT APPEAL NOTICE FILED	YES						
FILING INFORMATION SECTION							
SUBMIT DATE	Wed Nov 14 15:19:41 EST 2018						
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# **Request for Reconsideration after Final Action**

# To the Commissioner for Trademarks:

Application serial no. **87268709** DRÄGER(Standard Characters, see https://tmng-al.uspto.gov/resting2/api/img/87268709/large) has been amended as follows:

# ARGUMENT(S)

# In response to the substantive refusal(s), please note the following:

Please see the actual argument text attached within the Evidence section.

## **EVIDENCE**

Evidence-29 Evidence-30 Evidence-31 Evidence-32 Evidence-33

Evidence in the nature of Request for Reconsideration and Exhibits A, B, and C. has been attached. **Original PDF file:** evi 1652253881-20181114150137410602 . Request for Reconsideration - Drager - block letters.pdf **Converted PDF file(s)** (7 pages) Evidence-1 Evidence-2 Evidence-3 Evidence-4 Evidence-5 Evidence-6 Evidence-7 **Original PDF file:** evi\_1652253881-20181114150137410602 . Drager\_Request\_for\_Reconsideration\_Exhibit\_A.pdf Converted PDF file(s) (68 pages) Evidence-1 Evidence-2 Evidence-3 Evidence-4 Evidence-5 Evidence-6 Evidence-7 Evidence-8 Evidence-9 Evidence-10 Evidence-11 Evidence-12 Evidence-13 Evidence-14 Evidence-15 Evidence-16 Evidence-17 Evidence-18 Evidence-19 Evidence-20 Evidence-21 Evidence-22 Evidence-23 Evidence-24 Evidence-25 Evidence-26 Evidence-27 Evidence-28

Evidence-34
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Original PDF file:
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Converted PDF file(s) (74 pages)
Evidence-1
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SIGNATURE(S) Request for Reconsideration Signature Signature: /allison z gifford/ Date: 11/14/2018 Signatory's Name: Allison Z. Gifford Signatory's Position: Attorney for Applicant, PA Bar Member

Signatory's Phone Number: 610 640 5800

The signatory has confirmed that he/she is an attorney who is a member in good standing of the bar of the highest court of a U.S. state, which includes the District of Columbia, Puerto Rico, and other federal territories and possessions; and he/she is currently the owner's/holder's attorney or an associate thereof; and to the best of his/her knowledge, if prior to his/her appointment another U.S. attorney or a Canadian attorney/agent not currently associated with his/her company/firm previously represented the owner/holder in this matter: (1) the owner/holder has filed or is concurrently filing a signed revocation of or substitute power of attorney with the USPTO; (2) the USPTO has granted the request of the prior representative to withdraw; (3) the owner/holder has filed a power of attorney appointing him/her in this matter; or (4) the owner's/holder's appointed U.S. attorney or Canadian attorney/agent has filed a power of attorney appointing him/her as an associate attorney in this matter.

The applicant is filing a Notice of Appeal in conjunction with this Request for Reconsideration.

Serial Number: 87268709 Internet Transmission Date: Wed Nov 14 15:19:41 EST 2018 TEAS Stamp: USPTO/RFR-XXX.XXX.XX.2018111415194109 4713-87268709-610175a1e3f8cc898ff112d1aa f3a64d91e78d32f3de1414f37d91a162456125d2 4-N/A-N/A-20181114150137410602

# TRADEMARK

189462-5003

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Draegerwerk AG & Co. KGaA	:	Trademark Law Office 112
Mark:	Dräger	:	Trademark Attorney Erica Jeung Dickey
Serial No.:	87/268,709	:	
Filed:	December 14, 2016	:	

# **ELECTRONICALLY FILED ON NOVEMBER 14, 2018**

# **REQUEST FOR RECONSIDERATION**

Commissioner for Trademarks P.O. Box 1451 Alexandria, VA 22313-1451 S I R:

In response to the Office Action dated May 22, 2018, in final, please reexamine the application in view of the remarks and evidence provided below and herein.

# REMARKS

The Office Action, in final, refused to register the applicant's mark on the ground that the mark is primarily merely a surname under Trademark Act § 2(e)(4), 15 U.S.C. § 1052(e)(4) and that the Section 2(f) acquired distinctiveness claim was insufficient. The Office Action indicated that the evidence submitted to show a relationship between the applicant's goods and services for the acquired distinctiveness claim did not explain the relationship and did not provide the exhibits in the proper format. TMEP 1212.04(c); *In re Mueller Sports Medicine, Inc.*, 126 USPQ2d 1584, 1587 (TTAB 2018). Specifically, the Office Action did not find that the evidence submitted established a relationship between the goods in the applicant's prior registrations and the following services:

- consulting in the field of procurement and purchasing of hospital equipment, in International Class 35;
- consulting in the field of hospital construction, in International Class 37; and

• consulting in the field of equipment in the nature of development of technology for medical devices and apparatus, in International Class 42.

The applicant submitted evidence with its Voluntary Amendment dated April 30, 2018 in the form of three exhibits featuring promotional and informational materials from three companies, General Electric, Philips, and Siemens. The Office Action found that the submitted materials were insufficient because "evidence that one company offers medical devices and services identified in the application is insufficient to show a relationship for purposes of a Section 2(f) claim based on a prior registration." The Office Action further found that the applicant submitted no explanation of why the evidence in the Voluntary Amendment showed that the goods and services were related so that the distinctiveness would transfer to the services. The Office Action requires the applicant to submit additional evidence and an explanation as to how the goods and/or services in the claimed active prior registrations are similar or related to the goods and/or services in the application such that distinctiveness will transfer to the goods and/or services in the application such that

Accordingly, the applicant submits evidence from various companies which develop, manufacture, and sell medical devices and which also provide consultation for purchasing and procurement of hospital equipment, for hospital or related medical building construction, and for development of technology for medical devices and apparatus. The evidence submitted is in the form of promotional and information materials obtained from the third-party company websites, along with TESS print-outs of active registrations for several third-party company marks, showing a relationship between medical devices and the above-referenced consultation services. The applicant provides as follows an explanation of its evidence submitted herein for the consultation services in International Classes 35, 37, and 42.

# 1. Relationship Between Medical Devices in International Class 10 and Consulting in the Field of Procurement and Purchasing of Hospital Equipment in International Class 35

The applicant develops, manufactures, and sells medical devices for hospitals and offers its hospital customers assistance in procuring and purchasing hospital equipment. Other similarlysituated companies also sell medical devices and provide consultation for procuring and purchasing hospital equipment. Attached as Exhibit A are the following promotional and informational materials from six (6) companies with an accompanying explanation of the relevance, along with the URL and access date, and TESS print-outs of active registrations for a third-party company. a. GE Healthcare's Centricity<sup>™</sup> Services provides its customers with consultation for IT solutions for its medical devices and implementation and adoption of the IT solutions. (www.gehealthcare.com/en/products/centricity-services, accessed September 4, 2018);

b. GE Healthcare provides its AssurePoint program for "effective solutions aligned to your needs," "leverages equipment and expertise to support biomedical and clinical engineers and technicians," and provides multi-vendor services agreements for procuring medical devices, in this case, imaging devices. (www.gehealthcare.com/en/services/service-agreements, accessed September 20, 2018);

c. GE Healthcare provides its Healthcare Technology Management program which offers its customers the opportunity to optimize its medical equipment with outsource and inhouse support strategies, and with strategies for procuring parts for the medical devices and improving the asset lifecycle of a product. (www.gehealthcare.com/-

/media/ab069074adb341fcbald23b02e3f3ab.pdf, accessed November 12, 2018);

d. Philips provides its Healthcare Transformation Services to assist its customers in "enhancing imaging technology utilization and return on capital investment," which assists in capital asset planning and "help(s) healthcare leaders make strategic imaging equipment decisions." (www.philips.com.eg/...improvement/Capital%20Asset%20Planning\_overview%..., accessed via Google November 12, 2018);

e. Philips ProPlus service provides "the advantages of having one company to help you acquire, maintain and pay for the technology you need." (https://images.philips.com/is/content/PhilipsConsumer/Campaigns/HC20140401\_DG/Documents/propl us-2016.pdf, accessed via Google November 13, 2018);

f. Philips provides a "suite of products and services tailored to office based labs (OBL)" which provide a comprehensive range of products designed for the OBL and provide the means for purchasing and procuring the range of products for the OBL.

(https://www.usa.philips.com/healthcare/clinical-solutions/office-based-lab-solutions, accessed November 13, 2018);

g. Siemens Healthineers provides a Managed Equipment Service which is part of its Asset Management Services. The Managed Equipment Service "manages all of the healthcare providers' medical equipment concerns throughout the entire contract life-time, including,....provision, purchase, installation and commissioning." (<u>https://www.healthcare.siemens.com/services/enterprise-services/asset-management-services</u> and

https://static.healthcare.siemens.com/siemens hwem-hwem ssxa websites-context-

root/wcm/idc/groups/public/@global/@services/documents/download/mda4/ntq3/~edisp/sv\_es\_manage d-equpiment-services\_customer-brochure\_20180823-05676648.pdf, accessed November 12-13, 2018);

h. Medtronic "offers to customers" its EDI (Electronic Data Interchange) service for "a fully integrated order-to-invoice experience" and offers its "Medtronic Service Distinction" consultation services with subject matter experts across the company about its products because "no one knows our equipment like we do." (<u>http://www.medtronic.com/us-en/healthcare-</u> <u>professionals/product-ordering-inquiries/ecommerce-overview.html</u>, accessed October 29, 2018);

i. Welch Allyn provides its Partners in Care<sup>sm</sup> services for helping its customers "to effectively integrate new technology into [its] environment and workflows." (<u>https://www.welchallyn.com/en/service-support/partners-in-care.html</u>, accessed November 12, 2018); and

j. Baxter International, Inc. owns active U.S. Registration Nos. 559,700 and 1,649,669 for the mark BAXTER for medical devices generally in Class 10 and "management consultant services for procuring equipment for hospital and healthcare institutions" in Class 35.

# 2. Relationship Between Medical Devices in International Class 10 and Consulting in the Field of Hospital Construction in International Class 37

The applicant develops, manufactures, and sells medical devices for hospitals and offers its hospital customers consultation for hospital construction. Other similarly-situated companies also sell medical devices and provide consultation for hospital and related medical building construction and design. Attached as Exhibit B are the following promotional and informational materials from two (2) companies with an accompanying explanation of the relevance, along with the URL and access date, and TESS print-outs of active registrations for two third-party companies.

a. Philips healthcare consulting services provide an "ambient experience" for its clinical environmental design which has been implemented in over 1250 sites and its "Strategic Design" services offer examples of its successful hospital construction design consulting projects, under "Best Practices." (<u>https://www.usa.philips.com/healthcare/consulting/experience-solutions/ambient-</u> <u>experience#triggername=group1\_radiology</u>, accessed September 25, 2018); b. Philips offers "room construction and renovation support" for construction and renovation needs related to specific imaging products used in healthcare facilities. (http://incenter.medical.philips.com/doclib/enc/fetch/2000/4504/577242/577256/588723/588747/Turnke y\_Services.pdf%3fnodeid%3d8153147%26vernum%3d1, accessed November 9, 2018);

c. Philips offers "strategic design consulting" for workflow efficiency in a specific healthcare department or an entire health campus.

(http://incenter.medical.philips.com/doclib/enc/17481099/Philips\_Consulting\_Intl\_Strategic-Design\_overview.pdf%3ffunc%3ddoc.Fetch%26nodeid%3d17481099, accessed November 9, 2018);

d. Siemens provides consulting for hospital construction services via its "Answers for Infrastructure" program which addresses hospital and healthcare facility energy efficiency, hygiene concerns, operating room upgrades, and security concerns.

(https://www.downloads.siemens.com/download?A6V10219318, accessed November 9, 2018)

e. Siemens provides design and construction services, specializing in medical facilities construction, providing consultative services for design, space planning, which also consists of facility design services. (<u>https://www.healthcare.siemens.com/services/enterprise-services/healthcare-consulting-and-transformation-services/facility-design-services</u> and <u>https://usa.healthcare.siemens.com/customer-services/design-and-construction-services</u>, accessed November 13, 2018 and November 9, 2018); and

f. U.S. registration and published, pending application of medical device companies for marks registered for consulting services in the field of hospital construction as follows:

i. U.S. Registration No. 5,038,342 for the mark PHILIPS & Design;

and

U.S. Application Serial No. 79/213,040 for the mark SIEMENS

HEALTHINEERS & Design.

ii.

# 3. Relationship Between Medical Devices in International Class 10 and Consulting in the Field of Hospital Equipment in the Nature of Development of Technology for Medical Devices and Apparatus in International Class 42

The applicant develops, manufactures, and sells medical devices for hospitals and offers its hospital customers assistance in development of technology for medical devices and apparatus. Other similarly-situated companies also sell medical devices and provide consultation for development of technology for medical devices and apparatus. Attached as Exhibit C are the following promotional - 5 -

and informational materials from three (3) companies with an accompanying explanation of the relevance, along with the URL and access date, and TESS print-outs of active registrations for several third-party companies

a. GE Healthcare OEC service provides its customers with specially trained field engineers and technical support engineers to develop and implement surgical products. (https://www.gehealthcare.com/products /surgical-imaging/oec-c-arms/oec-elite-cfd---final, accessed September 20, 2018, and www3.gehealthcare.in/~/media/Documents/India/GatedPDFs/oec\_c-arm\_service.pdf, accessed November 12, 2018);

b. GE Healthcare delivering and developing medical device technologies with artificial intelligence. (<u>http://newsroom.gehealthcare.com/the-team-behind-the-future-of-ai-in-healthcare/</u>, accessed November 1, 2018);

c. Philips HealthSuite Labs accelerates healthcare innovation and offers "our customers direct access to our clinical research and digital experts for collaborative problem solving." (https://philips.com.eg/healthcare/innovation/about-health-suite/healthsuite-labs, accessed November 12, 2018);

d. Philips patient care and monitoring solutions provides technical consultation for its monitoring systems to improve the clinical and technical use of these systems. (https://www.usa.philips.com/c-dam/.../righfit.../VAS\_Communications\_Brochure.pdf, accessed November 12, 2018);

e Medtronic provides its "Meaningful Innovation" services which consults with patients, clinicians, and scientists for creating "patient-inspired technologies." (<u>http://www.medtronic.com/us-en/transforming-healthcare/meaningful-innovation.html</u>, accessed November 12, 2018); and

f. U.S. registrations for of medical device companies for marks registered for consulting services related to technical consultation for medical devices as follows:

i. U.S. Registration No. 2,392,496 for mark SIEMENS;

ii. U.S. Registration No. 2,805,306 for the mark SIEMENS INTEGRATED SERVICE MANAGEMENT;

iii. U.S. Registration No. 3,598,491 for the mark MAGFORCE;

- 6 -

- iv. U.S. Registration No. 4,999,865 for "Person" Design; and
- v. U.S. Registration No. 2,884,251 for the mark MEDTRONIC.

# 4. Conclusion

The applicant has submitted sufficient evidence to show the relationship between its medical goods and the consultation services in Classes 35, 37, and 42. The applicant respectfully submits that the application is in condition for allowance, and requests notification of the publication of its mark. The Trademark Examining Attorney is invited to call the applicant's undersigned representative if any further amendment will expedite the prosecution of the application or if she has any suggestions or questions concerning the application or the present Request for Reconsideration.

Respectfully submitted,

Allison Z. Gifford

Attorney for Applicant

AZG

Dated: November 14, 2018

Stradley, Ronon, Stevens & Young, LLP 30 Valley Stream Parkway Malvern, PA 19355 (610) 640-5800

# EXHIBIT A



Our services are designed to connect productivity with care by increasing usability, enhancing performance, and optimizing a solution's return on investment.

#### Centricity™ Services

Amid industry upheaval, healthcare organizations are under greater pressure than ever to be productive. Only by getting the most out of every tool can you deliver the care patients need with the efficiency the market demands.

Centricity Services are designed to connect productivity with care by increasing usability, enhancing performance, and optimizing a solution's return on investment.

Services are for customers only. Some services may not be available for specific products.





Tuesday, September 4, 2018

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# Support

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GE Healtheare IT Services Brochure 0.04MH O KD

# GE Healthcare



Healthcare IT Services



# ...it creates possibilities.

# Connecting Productivity with Care.

# OLATHE MEDICAL CENTER

Achieved significant outcomes within the first year:

- Launched integrated radiology and cardiology PACS
- Cut report turnaround time by nearly 90 percent
  Decreased the number of steps required to
- complete a diagnostic chest X-ray from 59 to 7

"The bottom line is that the consultation process cleared the obstructions from the road ahead as we went through the workflow analysis and proved what the benefits of PACS would be."

- Director of Imaging

SCHUMACHER GROUP MEDICAL BILLING

and and to be

- Achieved significant outcomes within the first year:
- Reduced manual payment posting by over 50 percent
- Saved the equivalent of two FTEs time
- Identified ongoing eligibility enhancements to further drive down denials

"Our monthly, focused KPI reviews give us great insight into how our operations are doing and where our biggest opportunities exist."

- Director of Program Management



### Consultation

#### You are not alone.

The healthcare industry is facing tremendous uncertainty, given evolving regulatory mandates that require a focus on technology utilization, performance-based outcomes, and integrated care models.

GE has successfully navigated change for 1.30 years. Our 900+ IT engineers, healthcare-focused consultants, and regulatory specialists have the expertise to evaluate and help define compliant and effective IT solutions.

Help increase employee and IT system productivity with the full depth and breadth of GE Healthcare's IT Consultation experience.

Workflow Consulting applies GE Healthcare expertise to existing workflows, optimizing clinical and business systems.

Regulatory Consulting aligns people, processes, and technology to support regulatory compliance and optimize overall performance. Technical Consulting offers expert insight into current processes, locating inefficiencies and optimizing the value of your technology.

Productivity Assessment comprehensively evaluates processes and equipment to identify potential sources of additional value.



#### Implementation

Execution is essential to success.

Low adoption, project mismanagement, poor communication, and lack of strategic vision are only a few of the factors that can derail software implementations and prevent them from living up to their promise.

Keeping promises is one of the things GE Healthcare's IT team does best.\* One of our 200+ project managers oversees each installation, giving you a single point of contact throughout the engagement. Strengthened by our implementation specialists and equipped with the latest communication tools, our teams have successfully delivered thousands of projects.

Gain high adaption right from the start with the help of our Implementation specialists.

Software Implementation gives you the project management, workflow design, and application training you need to get up and running smoothly.

Upgrade Implementation delivers key enhancements to improve organizational and clinical value while reducing disruption and downtime. Data Migration smoothly and securely moves your most important assets onto supported platforms in a way that fits your unique needs.

Amid industry upheaval, healthcare organizations are under greater pressure than ever to be productive. Only by getting the most out of every tool can you deliver the care patients need with the efficiency the market demands.

Learn more about Healthcare IT Services at www.gehealthcare.com/ITservices.



#### Customization

Make your systems work for you.

Tailoring multiple applications and key performance indicator reporting for demanding stakeholders is challenging enough. Meanwhile, industry consolidation is creating new requirements and a continuous need for integration.

Each year, our experienced configuration teams generate hundreds of custom reports, perform dozens of specialized integrations, and modify thousands of interfaces to provide rapid insight into performance, while enhancing user workflows.

Diminish disruptions, respond to required changes, and optimize productivity by customizing systems to your teom's needs.

Application Customization leverages new features and finetunes existing functionality for optimal organizational performance.

Interface Customization delivers comprehensive recommendations to better align your interfaces with your business requirements. Report Customization enlists expert writers and robust interpretation to capture new value from existing data.

Custom Integration optimizes continuity between new and/or existing software solutions, improving workflow and helping to reduce human error.



#### Education

Knowledge is power.

Although new technology may offer a clear return on investment, employees can resist or underutilize it unless sufficient time is devoted to explaining its capabilities and benefits.

Our solution-specific training managers have developed more than 500 courses with the learner in mind, increasing understanding and adoption. Whether you prefer online remote solutions, customized on-site training at your organization, or in-person classroom sessions at a GE learning center, our IT experts have developed a comprehensive set of modules and courses that can be tailored to fit your specific needs.

Drive understanding and increase adoption with the benefit of years of expertise from our Education specialists.

Master Trainer Education identifies leaders within your organization to train your staff with the help of experienced Application specialists. End User Education delivers role-based training tailored to your staff's specific needs, enabling each employee to develop the right expertise.

Some services may not be available for specific products.



## Support

Even the best systems encounter problems.

Achieving 100% uptime is an ambitious goal, especially when on your own. Having a partner that can quickly solve an issue or restore interrupted service is critical to managing internal expectations and maintaining high utilization.

Half of our entire service delivery organization is dedicated to providing customer-centered support. These highly skilled teams deliver swift diagnosis, resolution, and prevention of routine and complex issues.

Lean on our Support specialists to help reduce unplanned downtime, promote resilience, and enhance usability throughout your IT system's lifecycle.

Software Maintenance delivers 24/7 designated and online support for swift diagnosis, resolution, and prevention of routine issues. Dedicated Support offers exclusive, flexible, and customized service for customers with complex needs.



#### Enablement

#### Let us handle it.

In an unpredictable and complex environment, managing, staffing, monitoring, and securing critical IT solutions can be overwhelming and distract you from your primary goals.

Our specialized staff, advanced monitoring technologies, and secure remote facilities allow us to deliver the right solutions for your most pressing challenges.

Help reduce uncertainty, long-term expenses, and maintain your focus on delivering the best patient care.

Asset Management helps you track inventory and facilitate original equipment manufacturer contracting, promoting smooth, orderly operation of your system.

Remote Monitoring oversees your system 24/7 to fix issues in real time and prevent future problems before they occur. Business Continuity develops systems, procedures, and activities to keep your critical technology functioning in the midst of disruptive events, including disasters, resulting in reduced downtime.

GE Healthcare's IT Services are designed to connect productivity with care by increasing usability, enhancing performance, and optimizing your solution's return on investment.

#### About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter — great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

GE Healthcare 540 West Northwest Highway Barrington, IL 60010 USA

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GE Healthcare, a division of General Electric Company.

\*Collected about GE Healthcare's IT services from KLAS in July 2013 ©KLAS Enterprises, LLC. All rights reserved, www.KLASresearch.com

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service outcomes.

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Improving service efficiency and reducing costs throughout your facility starts with a clear picture of your current situation. GE Healthcare looks at several factors including asset inventory and equipment utilization using your machine data to help uncover a clear view of spending, and provide insights for optimal medical equipment service coverage. It also helps to understand how your inventory and expenditures compare to other facilities and to leverage best practices that have proven to generate improved efficiency and cost savings.

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#### **AssurePoint Full Services - Flexible comprehensive** offerings

Our full-service offering helps you optimize your assets, streamline processes, deliver excellent value, and promote exceptional patient care. We deliver compliant, reliable and responsive service through on-site and remote

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- Use mobile asset management to help ensure devices are readily available when needed
- Manage asset utilization and performance with cloud-based, mobilefriendly applications to improve productivity and reduce costs
- Leverage benchmarking and performance data to improve asset
   acquisition and service decisions
- Keep data secure with clinical networking and cybersecurity policy changes and processes
- Save time sourcing parts through our online Service Shop
- Get reliable parts shipments, including same-day or next-day options, though our 41 U.S. warehouses.

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**GE** Healthcare

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Service Agreements

# Flexible offerings to improve service outcomes.

Improving service efficiency and reducing costs throughout your facility starts with a clear picture of your current situation. GE Healthcare looks at several factors including asset inventory and equipment utilization using your machine data to help uncover a clear view of spending, and provide insights for optimal medical equipment service coverage. It also helps to understand how your inventory and expenditures compare to other facilities and to leverage best practices that have proven to generate improved efficiency and cost savings.

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# **AssurePoint Full Services - Flexible** comprehensive offerings

Our full-service offering helps you optimize your assets, streamline processes, deliver excellent value, and promote exceptional patient care. We deliver compliant, reliable and responsive service through on-site and remote expertise.



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- Benefit from innovative, advanced remote and proactive technologies
- Apply rich informatics to optimize asset utilization and support sound decisions
- Enjoy 24x7 access directly from your system for issue resolution, fixes, and training

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# AssurePoint In-House Support - Cost effective solutions aligned to your needs

Our flexible offerings can augment in-house expertise a help you optimize equipment uptime. You can choose fixed- or variable-cost service with comprehensive parts and specialty component options.

- Access the full range of GE service expertise and support technologies, including remotemonitoring and diagnostics
- Leverage equipment and expertise to support
   biomedical and clinicalengineers and technicians
- Take advantage of labor or parts pooling option t enhance performance and efficiency
- Access system upgrades that can extend
   equipment life and increase performance

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# AssurePoint OnDemand Services – Access to service, and parts on your terms

Maintain and enhance your equipment assets with flexible solutions, including upgrades, parts and restoration, support for seamless room moves, and mor-



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- Access GE labor expertise –more than 1,800 field engineers, 1,000 biomedical engineersand 350 online engineers and regional support experts, backed by sophisticated supporttechnologies
- Save time sourcing parts through our online Servi Shop
- Get reliable parts shipments, including same-day in next-day options, though our 41 U.&arehouses.
- Help optimize your assets with specialized service for equipment upgrades restoration and relocation
- Use the Repair Operations Center for fast, reliable system and parts repairs



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# AssurePoint Multi-Vendor Services – Expert service on nearly all imaging systems

Multi-vendor service reduces the complexity and high cc of service agreements with multiple manufacturers. You work under one contract with a single service provider t help reduce administrative costs and speed response time. You benefit from our 21 years of multi-vendor experience and a multi-vendor center that trains some 350 field engineers per year on more than 60 imaging devices from major manufacturers.

- Work with an industry leader managing more than 14,000 non-GE imaging devices
- Call on engineers equipped with the latest service technologies, including remotediagnostics and repair
- Choose from flexible offerings and tailor a solutio to fit your needs and budget
- Benefit from an extensive parts inventory and delivery system with 41 U.S. warehouses anath excellent track record for prompt delivery

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## Biomed Services – Solutions to help reduce cost and improve quality

Enabled by data and analytics, Biomed Services provide insights for better decisions and lower service costs. Fro on-site to on-demand services, we can help you improv asset availability and management, and enhance accreditation readiness and technology planning. You benefit from our team of more than 1,000 biomedical engineers trained on devices from more than 50 leading manufacturers.

- Use mobile asset management to help ensure devices are readily available when needed
- Manage asset utilization and performance with cloud-based, mobile-friendly applications to improve productivity and reduce costs
- Leverage benchmarking and performance data to improve asset acquisition and servicelecisions
- Keep data secure with clinical networking and cybersecurity policy changes and processes
- Save time sourcing parts through our online Servi
  Shop
- Get reliable parts shipments, including same-day ( next-day options, though our 41 U.Skarehouses.



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9/20/2018

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https://www.gehealthcare.com/en/services/service-agreements

### **GE Healthcare**

## AssurePoint\* In-House Access

Beyond maintenance: Strategic resources to support your in-house clinical engineering staff

## Take your clinical engineering program to the next level with AssurePoint In-House Access

Your clinical engineering department may be at a crossroads You want to mointain the control and flexibility of employing and developing an in-house staff with a deep knowledge of the hospital's equipment, staff, and culture. Yet you need to expand your strategic capabilities in order to achieve the quality ond cost objectives of the institution. Can you do both, costeffectively?

You can with AssurePoint In-House Access from GE Healthcare.

AssurePoint In-House Access lets you plug into the asset manogement capabilities and expertise of GE Healthcare in specific areas—such as parts sourcing, capital planning, program management, compliance auditing, and training—to enhance your in-house capabilities. This collaboration gives you the means to improve staff skills and productivity, reduce administrative costs and non-value-added activities, and position the biomedical department as a strategic enabler of high-quality, cost-effective healthcare.

## Proven capabilities to meet your asset management challenges

The volume and complexity of biomedical equipment in hospitals taday are staggering. The average 300-bed hospital has more than 4,500 devices, from anesthesia and lab equipment to infusion pumps and patient monitors. GE manages clinical assets for nearly 700 hospitals across the U.S. We've learned firsthand the challenges hospitals face:

- Hours spent each day finding, ordering, and managing parts
- Limited informatics to guide performance improvement
- · Copital ocquisition decisions driven by wants, not needs
- Administrative headaches from managing dozens of uncoordinated service contracts
- · Cost leakage due to non-standardized processes
- · Compliance processes that lack rigor and accountability

Sound familiar? AssurePoint In-House Access is designed to address these and other issues by putting GE technology, processes, and expertise to work for your team. With AssurePoint In-House Access, you get:

## Access to GE quality-approved parts vendors at preferred pricing

AssurePoint In-House Access puts the buying power of GE Healthcare on your side. We procure parts for more than 1.5 million devices and through our parts order management, you eliminate the hours spent chasing down suppliers to get the ports you need at the right price. In addition, GE Healthcare maintains a rigorous vendor approval and parts management process, designed to ensure the quality and performance of our parts.

Training that builds and maintains professional skills

The dynamic nature of medical technology demands continuous education for your biomedical staff. AssurePoint In-House Access provides a cost-effective way for your technicians to stay current with the latest advances by attending many of the same professional training programs we use to train GE biomedical engineers on technology, procedures, and compliance.





## Program benchmarking and analysis to improve performance

How does your biomedical program compare with those of similar hospitals across the country? What can you learn from their metrics around lease/own percentages, asset utilization, number of devices serviced per FTE, and other key performance indicators? AssurePoint In-House Access brings you a wealth of peer data, representing hundreds of institutions, so you can identify areas for improvement.

#### Advanced productivity tools for your biomedical engineers Your technicians will be equipped with many of the advanced technologies that GE technicians use to track work orders, troubleshoot problems, monitor job progress, and manage inventory.

## Technologies and expertise to drive service agreement consolidation

Biomedical departments are awash in service agreements from multiple providers with different coverage parameters. Using GE technologies and expertise, you can centralize your agreements in a common database for more effective management. This process typically reveals a high degree of redundant and/or obsolete coverage, enabling many hospitals to significantly reduce their service vendors and contracts— a cost- and time-soving move.

#### Capital planning informatics for smarter investing

With GE Healthcare's reporting and informatics, it's easy to gather information on your equipment usage, performance, maintenance expenses, and end-of-life. This data is benchmarked to national averages, as well as equipment rankings, to create reports that can help you evaluate your options and develop strategic acquisition plans for the nearand longer-term.

### Expert assistance with regulatory and accrediting requirements

With AssurePoint In-House Access you can leverage the skills and experience of GE compliance and quality specialists ond our signature PRIDE Survey to analyze your biomedical operations and institute rigorous processes to maintain and document compliance. This will help your hospital achieve constant readiness for regulatory review in an increasingly complex regulatory environment.

#### From asset maintenance to asset optimization

Biomedical devices represent more than 90% of the assets in a typical hospital, and clinical engineering departments do heroic work in maintaining and repairing the thousands of devices under their care. Taking clinical engineering to the next level—optimizing device utilization, compliance, life cycle, and return on investment—requires specialized skills and technologies that are beyond the scope of many departments.

AssurePoint In-House Access con help you fill in those gops by utilizing strategic resources from GE Healthcare. With our asset management expertise and technologies to complement your in-house capabilities, your program can become even more productive and effective. To learn more about how AssurePoint In-House Access can help your biomedical department move confidently into true asset management, contact your GE representative.

#### About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more informatian about GE Healthcare, visit our website at www.gehealthcare.com.

GE Healthcare 3000 North Grandview Waukesha, WI 53188 USA



imagination at work

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## LOOK TO GE TO achieve your desired outcomes in Healthcare Technology Management.

For 30 years, GE Healthcare has been at the forefront of delivering biomedical services that help drive improved outcomes for over 700 customers worldwide. Our flexible programs, enabled by data and analytics, offer core maintenance services and include attributes that go beyond break-fix. We help you optimize asset utilization, customize the right service plan for your organization, and adapt your program to changing needs.

Whether you're a large IDN or small community hospital, our biomedical services have the capabilities, resources and experience to help deliver the results you need and the value you expect.

"We ultimately selected GE because they offered more services to meet our additional business needs and they seemed more focused on our interests than their competition. Also, GE's overall annual costs were significantly lower, which was an important factor."

- Dave Schott- Assistant Administrator, Quantum Health



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#### We are one of the largest service providers in Healthcare Technology Management with millions of devices under our care.

- · 2M devices under management
- 3.3M devices with service histories
- 1,200+ OEM and vendor relationships
- 45,000 unique makes/models supported
- 3,300 service engineers nationwide
- 700 biomedical service customers



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#### Service Model Optimization

Help optimize and standardize your service strategy—outsource or in-house support

#### **Onsite Biomed Operations**

Highly trained embedded teams that provide support or operate your biomed program, depending on which service model is selected.

- Specific PM procedures based on make/model to help ensure compliance and asset longevity
- Timely on-site repairs
- + Collaboration with your organization



#### Integrated Asset Management

Help improve your asset lifecycle and reduce waste by getting more out of each asset

#### Mobil Asset Management

We help ensure your equipment is in the right place at the right time in the right condition.

- Lean process improvement to help ensure enhanced asset availability and utilization
- GE's RTLS technology Encompass helps reduce search time for mobile devices and enables providers to locate critical mobile assets in real-time<sup>1</sup>

## V

#### Sustainability & Innovation

Adapt to an evolving market and help ensure your program brings ongoing value

#### **Program Governance**

We help ensure sustainability of all financial and quality outcomes through rigorous program management and governance.

· Quarterly business reviews

Steering committees

#### Accreditation Readiness

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#### Scale and Expertise

 More than 2M models currently under management

- Local and vendor support for lasers, anesthesia, respiratory, sterilizers, laboratory and endoscopes
- Certified ISO9001:2000 and 13485 credentials

#### **Flexible Coverage Options**

Ongoing support and guidance on optimal coverage levels and services strategies customized to fit your unique needs.

- Weekday onsite coverage 8am-5pm with flexible options that include 24x7x365 emergency service available
- · Parts procurement through GE
- Staffing model optimization

· Right-sizing mobile inventories

#### Advanced CMMS System

A modern, cloud-based, mobile-friendly application portfolio for management of clinical assets.

- Helps to improve productivity and lower asset management costs
- Full reporting transparency so your costs and other critical activities are clear

#### **Technology Planning**

Benchmarking and performance data to optimize asset acquisition and service decisions.

- Full physical inventory with sustained accuracy
- Technology planning support based on your current IB, your organization goals and your market needs

neip ensure unguing reduiness of your program with evolving industry requirements.

 Our PRIDE audits comply with The Joint Commission, DNV, CMS, OSHA, FDA, hospital policies, and industry standard practices

#### **Ongoing Service Investments**

- GE continues to look to the future to anticipate and invest in ways to help bring ongoing value to your program.
- Focused on innovations to help enhance service technologies and capabilities including remote repairs, RTLS technology and new CMMS platform

#### Clinical Networking and Cybersecurity

Keeping your data secure is critical. GE can help you ensure your policies and process are robust and implement actions to help mitigate security breaches.

<sup>1</sup> The implementation and utilization of the enterprise asset management tool depends on your coverage level and terms of your contract.

Let us design a program that's right for your institution. Contact your local GE Healthcare Service representative for more information.

Or visit gehealthcare.com/services

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- 700 biomedical service customers

As a result of our integrated and comprehensive approach to Healthcare Technology Management, we have developed the expertise and experience to help you lower your overall cost, improve the quality of care delivery, and realize your goals.



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## Healthcare

Transformation Services

# Increasing your imaging systems' return on investment

Philips Healthcare Transformation Services – Capital Asset Planning

There is an increasing demand to enhance imaging technology utilization and return on capital investment. Philips provides insights and recommendations into technology utilization. planning, and future capacity needs based on data analytics, best practices, and simulation modeling to support data-driven decisions. Our capital asset planning services can help you make strategic and data-driven imaging equipment decisions.

Our capital asset planning services help healthcare leaders inake strategic imaging equipment decisions including current deployment. offective replacement, and re-deployment, as well as provide a global perspective of asset deployment. Insights are based on system utilization, condition of assets, and more and can support a single modality or department or multiple modalities or departments.

#### Key advantages

- Enhance capital equipment mix and capital budget spend to improve long-term clinical and innancial performance
- Leverage historical system data and analytic-based insights to reduce downtime and increase capital assot officiency
- Align patient volume with available capacity for enhanced patient satisfaction
- Fact-based and measurable change recommendations and decision support



#### A collaborative approach

Philips is a leader in providing data-driven consulting services for hospitals and healthcare systems around the world.

We take a collaborative approach to enable meaningful climical and business transformation. Our consultants work closely with clients as a full project team to agree on project scope and requirements, program deliverables, and timelines

Our capital asset planning services help you leverage data and data analytics to support capital asset planning and orgoing imaging systems performance management.

#### Data as the foundation

We believe healthcare transformation should be based on data and data should support each phase of the consulting engagement and drive our recommendations. We leverage a variety of data sources, research expertise, benchmarking, best practices, and tools to drive granular performance insights. Data sources include public data, client system data, a wealth of aggregate Philips install base information, third-party data, and more.

#### Capital Asset Planning includes:

- Assessment of equipment according to age, condition, and useful life within the system's lifecycle specific to the organization's strategic focus and goals.
- Analysis of current and future projected utilization, imaging, and regional market trends as well as comparison to external benchmarks and best practices.
- Alignment with strategic initiatives and structural design of the client's facility including growth and development plans, technology gaps, and longterm planning.

#### Leveraging analytics to unlock value

Applying analytical capabilities such as advanced visualizations and powerful algorithms - enable you to thoroughly assess your technology performance and unlock insights.

Areas of detailed information include:

- · Technology demand throughout the day
  - Provides detailed information regarding daily. weekly, monthly volume
- Volume can be gathered by system or service Detailed imaging system utilization rates
- Identify utilization rates by date or system
- Predict impact of increasing or decreasing system availability
- Current processes
- Cycle time performance compared to benchmarks
- Distribution of case length times
- Depict impact of late starts and provide insights into how late starts impact sequencing of events
- · Scheduling patterns, by asset or group of assets - Visually represent volume and case length
- Identify non-productive time between exams
- Referral Patterns
- Provides insight on which physicians are referring to the department







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#### Benchmarking and best practices

Our consultants leverage benchmarking tools and industry best practices as well as new methodologies, simulation tools, and more to help you create a databased capital asset strategy with detailed multiyear scenarios to help select the right plan for your organization.

Capabilities in advanced analytics, equipment, and clinical applications help us deliver value for your organization. We help align clinical, operational. financial processes to create new methods, change initiatives, and data-based solutions to achieve your capital asset goals.

#### Recommendations

Deliverables of our capital asset planning program may include

- Technology realignment strategy for replacement or re-deployment of assets based on current and future demands
- Prioritization of current and future technology strategies to increase system utilization and align to technology needs
- Program recommendations to share equipment or dispose of underutilized assets
- Business case to support request for system upgrades and/or replacement (including long-term strategic planning to optimize operations)

#### Results

Philips provides data-based recommendations to support strategic imaging technology decisions. Our capital asset planning recommendations have helped clients:

- Integrate data into current and new processes. and performance metrics
- Increase system utilization and patient throughput Leverage data to develop new insights and drive
- data-based decisions
- Create multi-year capital asset strategy





#### Additional consulting services

Philips Healthcare Transformation Services offers many other consultative services such as:

- Strategic healthcare consulting including performance improvement, population health, and experience design services
- Program implementation
- · On-site project management
- Clinical education programs

#### Learn more

Through transformative, end-to-end engagements. Philips Healthcare Transformation Services can help you unlock opportunities to solve your complex, intertwined challenges of care delivery. We can help you achieve meaningful and sustainable improvements in clinical excellence, operational efficiency, patient safety, and financial performance to improve value to your patients. For more information, please visit www.philips.com/healthcareconsulting.

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feasible are specific to the institution, where they were obtained, and may not reflect the results achievable at other institutions.

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## Philips ProPlus

Incremental rewards for choosing Philips equipment, service and financing

#### One company

Discover the advantages of having one company to help you acquire, maintain and pay for the technology you need. Choose Philips and we'll reward you with ProPlus, a value-rich offering for customers who want flexibility without having to forego simplicity or affordability.

#### How does it work?

When you select Philips service and financing solutions for your new Philips technology, you are immediately eligible for ProPlus benefits including incremental discounts.

- 5% discount off the list of your service contract
- 1.5% discount off your monthly financing payments

- Up to \$25K towards de-installation of your equipment at the end of the financing term should you opt to return it.

#### Pro Plus benefits

\* Flexible service agreement options- select the service option that fits your needs

\* Simple asset administration- one invoice and one payment

\* Economical pricing- discounts off both your service and finance contracts

Let us reward you with Philips ProPlus

Philips Medical Capital 866.514.4762 www.philips.com/pmc

Only from Philips Healthcare and Philips Medical Capital. Subject to the terms and conditions on your Philips Healthcare equipment quote. Certain credit requirements must be met and not all customers will qualify.





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Packages to orchestrate the perfect symphony

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#### Packages to orchestrate the perfect symphony





Home > Services > Enterprise Services > Asset Management Services > Asset Management Services

## Asset Management Services Performance through partnership



AMS Customer Video

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With Asset Management Services (AMS) from Siemens Healthineers you will have a strong partner by your side that takes care of all your medical technology assets, so you can focus on patient care. This will improve your medical technology fleet's performance thus realizing a better return on your asset investments.

### **More Information**

#### Downloads

AMS Brochure 0.5 MB

**Contact Us** 

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#### () Features & Benefits

<sup>1</sup> Deloitte Study 2014

 <sup>2</sup> Mayo Clinic https://www.mayo.edu/mshs/careers/laboratory-sciences, retrieved December 2016; The Lewin Group, Inc. The value of diagnostics innovation, adoption and diffusion into health care; 2005

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## Managed Equipment Services (MES) Performance through Partnership

SIEMENS .... Healthineers

siemens.com/managed-equipment-services

## Meeting the **challenges of a rapidly changing** healthcare environment

A fundamental change in healthcare markets has continued und, in some regions, is accelerating. For example, an ongoing reduction of funding in the face of rising demand is evident in the UK. While the number of imaging and radio-diagnostic examinations has increased by 43% between 2000 and 2013, the grawth of real-term funding has stalled over the some period and is expected to go down by 2% by 2020.<sup>1</sup> Also in focus is the quality of care. In the US, 90% of payments are expected to correlate to quality or outcomes (e.g. reduced hospitol readmission rates) by 2018.4 It is clear that healthcare providers will have to make both ends meet – constantly increasing efficiency and lowering costs while at the same time improving quality of care.



Estimated developments in UK



#### Partnership as the key to success

One of the most promising ways to align the goals of improving outcomes at reduced costs lies in a close callaboration with an industry partner – such as Slemens Healthineers – providing offerings such as a Managed Equipment Service (MES) that gives healthicare providers access to the latest technology and helps them improve workflaw and productivity. White Slemens Healthineers take care of the technology management – from planning and installation to user training and maintenance – hospitals can concentrate on their core competency: providing excellent patient care.

<sup>1</sup>"Working differently to provide early diagnosis – Improving access to diagnostics." Detoitte, 2013 <sup>2</sup>U.S. Department of Health & Human Services, press release January 26, 2013.

## Leading-edge, affordable healthcare solutions for the challenges of today and tomorrow

We at Siemens Healthineers provide [texible, holistic Enterprise Services & Solutions (ES) for healthcare providers that help reduce costs, improve clinical outcomes and enhance patient experience. By combining our technology leadership with profound experience in clinical consulting, workflow optimization and departmental outsourcing, we create value beyond our product business for your healthcare institution. Managed Equipment Services are at the core of our ES offering. As healthcare targets grow more challenging and controlling costs gets tougher, a Managed Equipment Service (MES) solution is an increasingly attractive option.

A Managed Equipment Service solution is a flexible and specialized partnership with a private sector service provider, tike Siemens Healthineers, to provide you with access to innovative medical technology and equipment. This health-care partnership typically covers a period of 10–25 years, sometimes longer, for a fixed unnual fee.

An MES solution is often port of a Public Private Partnership (PPP).

An MES manages all your medical equipment concerns throughout the entire contract life-time, including ownership, pravision, purchase, installation and commissioning, usertraining, asset management, maintenance and angoing replacement. Moreover, we offer a so-called 'multi-vendor' MES. This means, besides Siemens equipment, non-Siemens products can be offered within the service.

An MES allows you to take care of your patients, while Siemens Healthineers take care of the technology. No matter what your individual requirements are ...

Our MES portfolio is comprehensive and, through expertise and experience, we will analyze your requirements and provide the service and equipment that exactly fit your needs. Thus, no two MES contracts ore exactly the same. With a reputation for innovation, flexibility and know-how, Siemens Healthineers deliver expertise in more than one area:

з

Medical Technology

- Financing Options
- Transformation and Advisory Services
- Managed Departmental Services
- Planning Solutions
- Education Services
- System Care and Repair

## You can count on a comprehensive **partnership** – **from planning to operations**

#### Medical Technology

Medical Technology is at the heart of our MES concept. We offer leading-edge medical imaging equipment and are perfectly placed to provide you with optimal technology to keep your clinical practices up-to-date. We take care of equipment already in use, new equipment and all subsequent replacements. We take our environmental responsibilities very seriously too. All equipment is decommissioned and disposed of in occordance with relevant local legislation.

#### **Equipment Optimization**

With Siemens Healthineers as your partner, you are working with one of the world's largest producers of medical imaging modalities. We help to audityour existing equipment and assess your future needs in order to get more value from your installed base. By leveroging global procurement capabilities, we help achieve economies of scale and total cost of ownership.

Fram future-proof planning to lifecycle optimization Siemens Healthineers cover all aspects related to your medical equipment: procurement, installation and commissioning with as little disruption to hospital services as possible. Continuous servicing and comprehensive training programs are included to get the most from your investment. Siemens Healthineers understand that when you need to treat more patients more quickly, reliability is key. That's why we help you achieve a reduced downtime. By providing regular service reports and analyses, we proactively manage performance and reliability issues. With a Siemens Healthineers MES contract, the key risks involved with medical equipment – technological, operational and financial – are managed for you. Equipment availability is contractually guaranteed!

#### Planning and Financing

Having a fixed annual fee for a Siemens Healthineers MES reduces complexity and gives you increased budgetary surety. We offer a variety of infrastructure and equipment financing instruments, depending on your need and local conditions. Precious and scarce capital is freed up through an efficient, transparent financing arrangement.

4

#### Professional Project and Program Management

Siemens Healthineers Project Managers provide smooth execution during the start-up and operational phases of the MES. Our Planning and Workflow experts optimize relevant clinical processes throughout the MES contract. By engaging with Siemens Healthineers, Transformation and Advisory Services early in a project, improved hospital design and equipment specification/utilization are built in.

s



By combining the optimal range of our Asset Management portfolio you benefit from a customized solution that exactly fits your needs. Let us manage all your equipment-related concerns while you facus on what's most important – potient care.

## Transformation through partnership: working with you to drive success

#### Santa Lucia Cartagena and Los Arcos del Mar Menor University Hospital, Spain

The results of the Managed Equipment Services (MES) partnership with Santa Lucia Cartagena University Hospital and Los Arcos del Mar Menor Hospital have exceeded expectations after 5 years.

The Ministry of Health of Murcia faced increasing healthcare demands in the coastal areas of Cartagena and Mar Menordue to a growing population. Therefore it decided to invest in the two new hospitals Sonta Lucia Cartagena University Hospital and Las Arcas det Man Menor University Hospital, providing almost 1,000 beds, and equipping them with state-of-the art medical technology.

In 2010, the Ministry of Health of Murcia signed a 15-year MCS partnership contract with Stemens Healthineers to Improve the technological innovation as well as financial and planning security. The results, after 5 years, have exceeded all expectations.

#### Some key benefits include 83% improvement in resolution times and 90% reduction in equipment damage costs for Cartagena Hospital, as well as 25% lower administrative costs and 0% re-scheduling rates for patients at Mar Menor Hospital.



#### Barts Health NHS Trust, London, United Kingdom

Barts Health NHS Trust is the largest Trust in the UK with 15,000 staff treating 2.4m patients annually.

Stemens Healthineers has a 35-year Managed Equipment Services (MES) partnership to suppart the redevelopment of St. Bartholomew's (Barts) and the Royal London hospitals, and provide them with latest medical technology until 2045.

This means not only supplying and managing medical technology for the hospitals' radiology and cardiology departments, but also sharing their expertise through the construction phase to help to perfect the hospital's design: a building fully integrated with the equipment!

#### Fiona Stanley Hospital, Perth, Western Australia

II) the largest health infrastructure project ever undertoken by the Australian State, opening in mid-2014, Siemens Healthineers was awarded a contract to take responsibility for all its medical equipment.

This means Siemens Healthineers delivers an MES which includes:

- Planning, procurement, commissioning and management of all the MES equipment
- Medical technology maintenance and user training

The agreement involves capital investment of 100 Million Australian Dollars (78 million Euros) and includes around 6,000 items from CT scanners to monitoring equipment.



The multi-vendor opproach provides the end-users with free choice of supplier and a single point of contact!



#### HagaZiekenhuis, The Hague, Netherlands

HagaZiekenhuis, created in 2004 as o result of the merger between three hospitals, searched for a long-term healthcare solution to manage its imaging technology.

Siemens Healthineers were the best choice and, therefore, awarded with a 15-year contract for financing, supply, maintenance and refreshment of imaging equipment.

"Just looking at purchasing and maintaining systems, we expect to sove around five percent per year. And that's with-out all the time and money we save by not having to start up complicated tender procedures for each new system."

Peter Kraaijeveld. Sector Manager of the Badialogy Department at HagaZielienhuis The hospital gained flexibility regarding other investments, increased patient throughput and improved potient care through faster diagnosis.



#### William Osler Health System, Etobicoke and Brampton, Canada

When one of Canada's largest community hospitals faced the chollenge of ensuring that the diagnostic imaging equipment is able to meet the requirements of diagnosing more complex diseases with funds continually shrinking, an MES from Siemens Healthineers was the solution.

For a contract time of 15 years, Siemens Healthineers will provide a comprehensive suite of management services for the majority of the medical imaging equipment throughout all of Osler's haspital sites.

"We now have a great pertiser who can help us to look at best practices, best workflow and optimal outcomes for our potients."

Dr. Joseph Fanthröther, Corporate Mes cal Director and Ubiel of Diregonalis Imaging of William Oktor Health System One key consideration in awarding the contract to Siemens Healthineers was that they offer a strategic partnership approach beyond the traditional product business. This means more than offering just excellent technology and service.



The statements by Siemens Healthineers customers described herein arc based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, tevel of IT adaption) there can be no guarantee that other customers will achieve the same results.



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siemens.com/healthineers









## OVERVIEW

Increase efficiencies and reduce costs through the two eBusiness channels that Medtronic offers to customers:

- EDI (Electronic Data Interchange) provides a fully integrated order-toinvoice experience
- Medtronic Connect gives you secure, 24-7 access to place orders, check price & availability, view order history, track packages, download invoice copies & delivery notes, register devices, and more.

These safe and secure channels work together to simplify, automate, and standardize the order management and supply chain process from start to finish. The ERP system integration enabled with EDI, along with the ordering and inquiry functionality provided by Medtronic Connect, can greatly improve the cost effectiveness of your organization.

## EDI: REDUCE COSTS WITH TRANSACTIONAL AND OPERATIONAL AUTOMATION

EDI allows you to interact directly through your existing ERP system, seamlessly integrated with Medtronic to:

- Place orders through existing ERP system
- Send item, quantity and shipping details
- Receive automated confirmations back to ERP system
- Receive advanced ship notifications when product ships directly into ERP system
- Provide visibility to carrier and product information, allowing you to proactively staff for receipt and plan for procedures
- Receive automatic receipts of invoices directly into ERP system for payment

View supported EDI transations, EDI service providers, and EDI standards and protocols used at Medtronic.

#### SEE DETAILS

Medtronic offers product catalog scrubbing to improve ordering accuracy. If used in conjunction with the EDI ordering, order confirmation, invoicing, and payment processes, great benefits and efficiencies can be achieved throughout the supply chain.

REQUEST CATALOG SCRUB

### MEDTRONIC CONNECT: SAVE TIME AND INCREASE EFFICIENCIES

Medtronic Connect gives you secure, 24x7 access to quickly and conveniently:

Place orders
Healthcare Professionals - Ecommerce overview | Medtronic

Page 3 of 4

- Check price and availability
- View order history
- Track shipments or obtain proof of delivery
- Download invoice copies
- Browse our catalog
- Receive automated confirmations & email alerts
- Register devices
- Submit SEEQ<sup>™</sup> MCT prescriptions

### REQUEST ACCESS

Already have a Medtronic Connect login and password?

LOG IN TO MEDTRONIC CONNECT

# **REQUESTEDI SETUP**

Complete the onboarding form to get set up on EDI with Medtronic

GO TO THE FORM

## **MEDTRONIC CONNECT**

24x7 access to ordering, inquiries, and device registration

REQUEST ACCESS

Healthcare Professionals - Ecommerce overview | Medtronic

Page 4 of 4

CONTACT US

### **Medtronic EDI**

edi@medtronic.com

### **Medtronic Connect**

877-527-3426

connect@medtronic.com

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**United States** 

(/us-en/index.html)

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Equipment Services and Support

### EQUIPMENT SERVICESAND SUPPORT

Unwavering dedication to patient safety and commitment to help customers achieve operational performance.

### DELIVERINGECONOMIC VALUE

Maximizing your equipment uptime and providing value through proactive servicing, responsiveness, agility, improved equipment availability, economical service and support programs, and life cycle savings.

### WHAT IS UPTIME?

Uptime means confidence — the confidence that comes with having critical patient care equipment expertly maintained, supported, and available when you need it.

### INNOVATIVE OFFERINGS FOREQUIPMENT CARE & SUPPORT

Just as equipment varies in design and technology, so do the offerings we provide. This means we can better meet the needs and expectations of our customers. Find out what is available for your Medtronic equipment.

# CAPITAL EQUIPMENT: MORE THAN A PURCHASE, IT'S A LIFE CYCLE INVESTMENT

### CONTACT US

To learn more about the benefits of Medtronic service and support solutions and how they can help you optimize return on your capital assets, contact your local equipment service and support team.

Contact Us (/us-en/healthcare-professionals/services/equipment-servicessupport/contacts.html)

### EXPERTISE YOU CAN TRUST

Our highly trained, specialized service technicians deliver the in-depth product knowledge, clinical application understanding, hands-on experience, and dedication you can rely on.

SEE OUR PRODUCTS (/us-en/healthcare-professionals/services/equipment-servicessupport/products.html)

### HIGHEST QUALITY STANDARDS

Quality is our top priority. We use only OEM qualified and approved procedures, as well as parts set forth by our rigorous Quality Management System.

LEARN MORE (/us-en/about/corporate-social-responsibility/medical-device-quality.html)

### THE MEDTRONIC SERVICE DISTINCTION

No one knows our equipment like we do. Original equipment design, life cycle history, and consultation with subject matter experts across the company combine to provide exceptional service that sets us apart from competitors.

http://www.medtronic.com/us-en/healthcare-professionals/services/equipment-services-su... 10/29/2018



HEALTHCARE PROFESSIONALS

ABOUT MEDTRONIC

TRANSFORMING HEALTHCARE



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# Partners in Care<sup>™</sup> Services

Support, education and professional services that keeps equipment in the hands of clinicians.



Partners in Care Services" SUPPORT | EDUCATION | PROFESSIONAL



# Partners in Care Services.

Three essential services. Flexible choices. One collaborative resource.

Nearly one hundred years of experience in frontline care has helped Welch Allyn understand that healthcare staff can't afford interruptions from out-of-service equipment. That's why we designed Partners in Care Services to deliver flexible programs to optimize your investments:

- > Support Services to help manage service complexity and minimize downtime
- > Education Services that promote clinical/technical best practices to enhance patient care
- > Professional Services to help effectively integrate new technology into your environment and workflows

These programs are designed specifically to help you adopt new methods of biomedical, clinical, and IT excellence and provide the highest level of care, delivering a collaborative service relationship that's critical in helping you meet your facility's top priorities, including:

> Strengthening staff competencies

Your need	Partners in Care delivers:			
Improve system uptime and performance	Comprehensive suite of support, education, and professional services			
Predictable support costs	Support agreements with fixed costs sresulting in no unexpected financial surprises			
Regulatory compliance	Online or classroom; technical training courses with documented certification of completion			
Faster response times and issue resolution	Support agreements provide defined, enhanced response times			
Timely access to parts	Direct line to Partners in Care Technical Support Center and expedited shipping			
Timely, predictable, automated access to soft- ware and firmware updates	The Service Tool enables real-time access to updates and licensable upgrades			
Efficient, cost-effective methods to keep equipment maintained	The Service Tool provides sequential process steps, with specifications and parameters at your fingertips			

> Optimizing technology assets

> Achieving system reliability

> Extending the life of your systems

> Managing costs



# Experience the Partners in Care advantage.

Partners in Care Support Programs go beyond the standard product warranty to take service and support to another level. It provides faster turnaround times, free shipping, software updates, and more—everything you need to achieve higher service levels and to meet your goals for cost and lifecycle planning. Talk to your Welch Allyn representative on how Partners in Care can help you.

To learn more about how Partners in Care Services can help you care for your patients and maintain your equipment, contact your Welch Allyn representative, call 1.800.535.6663 to speak with a customer service representative, or visit www.welchallyn.com/services.

Welch Allyn Corporate Headquarters 4341 State Street Road, P.O. Box 220, Skaneateles Falls, NY 13153-0220 USA (p) 800.535,6663 (f) 315,685.3361 www.welchallyn.com

WelchAllyn'

Certain Partners in Care service options and features are not available for all products or in all countries. Service features and options for your equipment are determined by the written terms of your Service Agreement.

@ 2014 Wetch Allyn SM4028 Rev B

Advancing Frontline Care"



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Serial Number	71620383
Filing Date	October 29, 1951
Current Basis	1A
Original Filing Basis	1A
Registration Number	0559700
Registration Date	June 3, 1952
Owner	(REGISTRANT) BAXTER LABORATORIES, INC. CORPORATION DELAWARE 6301 LINCOLN AVENUE MORTON GROVE ILLINOIS

http://tmsearch.uspto.gov/bin/showfield?f=doc&state=4806:tpajex.8.92

# (LAST LISTED OWNER) BAXTER INTERNATIONAL, INC. CORPORATION BY CHANGE OF NAME FROM DELAWARE ONE BAXTER PARKWAY DEERFIELD ILLINOIS 60015

Assignment Recorded	ASSIGNMENT RECORDED
Attorney of Record	Jeffrey C. Nichols
Type of Mark	TRADEMARK
Register	PRINCIPAL-2(F)
Affidavit Text	SECT 15. SECTION 8(10-YR) 20120601.
Renewal	4TH RENEWAL 20120601
Live/Dead Indicator	LIVE



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Goods and Services	IC 035. US 101. G & S: business services offered to hospitals for monitoring and controlling hospital resource consumption and cost; management consultant services <b>procuring equipment</b> for hospital and healthcare institutions; hospital management services, namely, promoting and consulting regarding hospital wide systems for acquisition and storage of hospital supplies; business consulting, planning and project management for healthcare facilities. FIRST USE: 19890101. FIRST USE IN COMMERCE: 19890101
	IC 042. US 100. G & S: providing healthcare and hospital services to patients in the hospital, clinic, home, or medical clinics. FIRST USE: 19890404. FIRST USE IN COMMERCE: 19890404
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Serial Number	74800103
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Published for Opposition	April 9, 1991
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Attorney of Record	Jeffrey C. Nichols
Prior Registrations	0559151;0559700;0566340;0567485;AND OTHERS
Type of Mark	SERVICE MARK

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EXHIBIT B



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# The transformation **imperative**

Healthcare today is full of complex challenges, continually testing your ability to deliver high quality care. This calls for an innovative approach to healthcare. With a focus on high quality care and human empathy, our holistic approach provides deep insights to patients, family and healthcare professionals' needs.

Based on our expertise in design, clinical and operational consulting and technology, we can work with you to innovate and shape your facility. Using people-centric design thinking methodology, to better meet your care delivery challenges.

### How do we **improve value** for your patients, family and staff

### Philips Strategic Design

Philips Strategic Design offers a holistic approach to the healthcare experience, taking into account clinical, operational, and experiential aspects. A multidisciplinary team of experts will collaborate with patients, staff and key stakeholders to deliver solutions with a people-centric focus. Solutions range from experience research, planning and experience design to implementation and management.

Consider that a finendber hospital can lead to happing patients, whron in time notables you to provide batter care. This is our guidane vision. Together with your key stakeholdes our experience consultant apply a unique methodology – a collaborative and multi-disciplinary approach to innovation and problem solving, we help you address the complex challenges of creating an environment that institic a sorts of wellbeing.

The collective (noughts, intentions and creative ideas of your medical staffs and hospital readius ng, are used to create break through solutions insights will be prioritized and stranslation line customized, meaningful environments that can enhance patient assistation increase staff preductivity, ostinize workflow, and essoluble a trunc us transf differentiation (in your inselfations) facility. And as all key stateholders are involved from the start, buy in is included where naked, includent larger active to the start, buy in is included where naked, includent larger patients.



The Philips design team - they get hoalthcare. They understand what a patient is experiencing, they understand what a patient feels. So they design the workflow to complement the ambient crivitormont. They gave us some fantastic ideas

Elise MacCarroll, Administrative Director. Florida Hospital Philips has a robust program to observe, assess and evaluate the way that care is delivered, to provide excellent patient and staff experiences, and build an inclusive strategic plan to achieve your institutional goals.

Our process is research based. Each relevant stakeholder group in the Care cycle is evaluated. Pathways and interactions are mapped, from initial contact to completion: Based on these findings as well as data analytics, areas thet can be positively influenced are ginpointed.

Our recommendations range from articulation of experience strategies to detailed implementation plans, and continuous process inforovement. By focusing on the quality of the delivery of care, you can have an impact on churcal executions and noterational efficiency.





We can support you in many ways, ranging from development of high-level strategies to resolution of discrete operational issues. The objective is always to get an in-depth understanding of the patient, family and staft experience needs and to identify optimization opportunities.

### Strategy

We will conduct relevant research to help define what it means to be people-centric We are consisting the entropy of the production of a "which enable the proposition and guide you how provide metation of a "which enablith" and welfbeing proposition. Demographic and ethnographic studies, market analysis, and assessments of current facility design have use gen insight into the goals your hospital should embrace to better support your audience.

For each stakeholder group, we determine key functional, behavioral and emotional touch sponts across the care randouwn. These strees of life' help us map experience flows where needs analysis substantiates applicable strategies.

6

Complete • Vision alignment, through clabigue with the hospital leadership Ethnographic Xudy to better position the hospital within the community • inspit parenticion and analysis, e.g. generating:--claph handwelse of the end-users • Experience Load molphylic of vision different roles materitors, and dispendences

### Concept

How does the strategy defined impact the physical, organizational, and operational structure in your hospital? To answer this we develop concepts supported by sketches, schematicis and visualizations. Once a final direction is formulated, we create detailed specifications for implementation of this new vision.

We wark clovely with architects and interior designers to describe an environment that is psychologically supportive, has less negative associations, and increases patient and staff satisfaction

Examples: Examples: Examples: Scenario Duilding – physical/janocelukal reviganization Experience our enverticemation: e.g. Anterative story/boards.expenence zoming. Interfors space destign Detailade anyeriance destign

### Realization

Following the detailed spectrication, we carry out all steps reward implementation including planning, creative direction, sistilation, technology implementation and support an on-onset direction will have (lawe) together with fold constructors to help provide quality and adherence to design opecifications and expectations

For the physical environment we can provide our off-the-shelf Ambient Experience room solutions, we can tallor Philips solutions, or we can integrate line departy offerings Other key enablies include lighting, communication technology behavioral training, and data management

Examples: - Greenfield (new construction) and Brownfield (jetovation) schematic design - Realization of final datege according to specifications - Orwand dispecto - Segect oversign:

### Evaluation

A transformed healthcare experience can bring significant change. You may need to make minor adjustments to reinforce behavior. Through orgoing assessment, we can identify where there are issues, intervene, and work to bring them back to appropriate predefined levels

in this way Philips becomes your partner for continuous experience improvement so you can malintain a high level of service delivery that maximizes to positive impact. This can reduce workload for your staff and create a higher level of satisfaction for all

Examples: - Post occupancy analysis - Measurement of improvements - Patient experience evaluation - Staff experience evaluation - Rapid improvement process





### Ambient Experience room solutions

Patients who enter a hospital may be frightened as they are anxious about the outcome and the procedure itself. Anxiety increases stress levels in patients and impacts the patient's experience. Yet, anxiety can be reduced at each interaction, each point of contact, by providing attentive care and the proper information.



ß

Ambient Experience is a purposefully designed healthcare anvironment Ambient Excertence Interrates technology spatial design and workflow improvements to create a comfortable and stress reducing environment for your patients, and an efficient, clutter-free workspace for your

Patients can personalize their surroundings, wrapping themselves in a relaxing ambience.

Patrent can gain a sense of control via the selection of different themes, thereby becoming more at ease with the proceedings. When combined with an improved workflow, BIOERSSES AND BIOLESUPER SAR FUR MORE SMOOTH

A customized Ambient Experience environment can lead to increased patient and staff satisfaction





MRI







Uptake Room The Ambient Experience uptake room transforms a standard uplaxe room into one that changes according to the various workflow steps



CT Boost your Sale P investment by reducing dutter and speeding throughout in a patient-friendly rotam environment

Radiography Focus on the values and needs or both patients and medical staff in your X-ray suite.

Mammography Helps women relax with soothing audiovisual and

lighting atmosphera

Custom Solutions Ambient Experience



Ambient Lighting, thematic video/sound and a ceiling lighting or video element above the maging system Ambient Experience Tier 2: including dynamic Amb.ont unitons and thematic video/sound

> Ambient Experience Tier 1: adding coft colored. creative lighting encouraging a sense of well-being

Validated room designs can help

support the specific procedure for

Ambient Experience designs are available to support the radiology,

cardiology, oncology, emergency

department and increasingly also

new areas such as NICU and ICU

The solution can be extended from

room, waiting areas and even whole

budgetary constraints and project parameters,

we can offer you a variety of scalable Ambient

Ambient Experience Tier 3: including dynamic

Experience solutions that work best for you.

the procedure room to the control

Depending on your clinical requirements,

departments.

different clinical areas, which are part of

all our Ambient Experience solutions.

When your situation requires a unique response, Philips can customize one. Work with us to tailor any of the elements to bring maximum benefit to your space

9

PET/CT Integrate AE across uptake, exam and control rooms for a

### **Best practices**

With over 100 consulting projects realized and an installed base of more than SQO Ambient Experience Solutions, proof of success can be measured. Philips customers who have invested in transforming the overall patient and staff experience across their care setting find that there is added value in this approach. Their voices reflect the advantages of a revitalized healthcare environment

### Strategic Design successes

Broward Health Infusion Center, US, wanted to modernize an outdated, busy adult

infusion center to provide a better experience. The Strategic Design team gained insights about workflow, space usage, and staff and patient experiences using Experience Flow Mapping and experience design

The Philips' team led a clinical and operational assessment and process redesign for superb efficiency. Based on data, experience flows and experience inputs, a complete spatial redesign was carried out Broward won the significant healthcare Avatar award, based on the continued experience improvements over a sustained period.

10

wants to ensure that the flow and experience of the new hospital meets the communities' needs making the hospital the preferred destination for patients living in the area. The Philips' team led a collaborative consulting engagement using research, insights key user needs and experience flows, creating experience concepts and guiding implementations. The areas addressed are the inpatient future 200+ bed hospital, the Emergency Department. Imaging Center and Medical Office Building The client has currently started to build the new hospital, in which many of our concepts will be implemented.

A US based community hospital

Sparks Health System in Fort Smith. Arkansas, US

is a large regional hospital that offers a broad range of innovative cancer care services. They wanted to implement state-of-the-art techniques for improving patient experience in the PET/CT suite Philips healthcare consulting experts worked closely with Key stakeholders to Understand the clinical, functional and emotional needs of the patient population. Design thinking in healthcare was then applied to transform the patient experience. At the Sparks Radiation Treatment Center the Ambient Experience suite incomorates innovative clements in the uptake room and the PET/CT exam room designed for improving patient experience and enhancing the clinical process

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The Rospital and Phillips just very recently conducted a survey The Biol Shake Shake Princips and New Yorkshift Shake Shake



### The Walt Disney pavillion at Florida Hospital for Children

includes a pediatric Emergency Department that stands as a case study for how an entire department can be transformed by Philips Ambient Experience

 Ranked in 2010 as the best pediatric ED in the country in patient. satisfaction by Press Ganey

ED visits almost doubled since the introduction of Ambient Experience Won prestigous iF design award

Generated visibility and thought leadership via peer industry conferences

Ambient Expensesce of Florida Hospital for Children





cases may vary

### Ambient Experience room solution successes



12

### installed base survey

When 100 customers in 27 countries were Interviewed, the consensus was that Ambient Expenence works - 76% saw an increase in staff satisfaction (they prefer the AE rooms)

- 70% feel the Ambient Experience is worthwhile, one in four gave AE an Net Promtor Score of 9 or 10.

-Highest impact on NPS score: Advantages with highest influence on NPS score - Increasing productivity: less tepeat imaging needed as patients are less likely to move due to reduced stress, anxiety levels - increased staff satisfaction, staff finds it easier to focus on patients needs and prefers workning in a nice. space very environment - increased patient volume (depends on county situation) more attractive to claustophobic or fingthered patients, children

Source: Subaw Contailing Installed base survey, September 2011 Results from case studies are not predictive of results in other cases Results in other cases may viery

### The effects of Ambient Experience on patient satisfaction at Jeroen Bosch Hospital

Two of low radiography norms at lensen Bosch Hoppital, in "S-Hertogenbosch, the Netnerlands, are equipped with Ambient Experiment. A study with D2 patients was conducted to distermine the languat of AE on papert statistion. Net Promoter Score (NPS), a figure that indicates to what exents some ar withing the command the hospital to people they innow, was used to judge the issuits. Patients who underwent an X-ray exem; in an AE room, showed noticeably righter (floworkik) NPS - 192% shan tines examined in a roomal'X-ray room, which increased to -45% when patient sources the floworkik DAE for to the exam

Source The influence of AE on anxiety and patient satisfaction in a digital X-ray room. Philips Research Laboratories Europe in collaboration with Jeroen Bosch Hospital, the Netherlands (Nov 2011)

Results from case studies are not predictive of results in other cases. Results in other cases may vary



### Patient in-bore solution at Herley Getorte University Hospital, Denmark

Patient separateries a auxion factor for the successful operation of the rad ology department at Herley Getofte Linikersky Hospital in Demark in their liques 3 Of imaging from they have installed a full Ambent Experience solution new allow with the patient In-bore solution. The patient in-bore solution distracts head this's patients when they more into the MRI. Heleng them to relax and hole suit during an MRI exam. Patient indicates the department of the MRI. Heleng them to relax and hole suit during an MRI exam. Patient and teams conductive a survey of patients sectioned in the patient in one solution. Bloot 30% solution went by duckly Patients are very obstitive and duck skif furthers canner when comma galad.



13

Source Survey results from Herley Hospital published in FieldStrength - Special Issue ISMRM 2015

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### Patient and staff experiences

"It calmed me down when I was recling stressed. I had a really good experience I even forgot about the exam, It was nothing like what I experienced before" Agmer Stratise, patient: citizage de Bordi wite: Bark, Fance





 aggressively recommend the Disney Family Cancer Center Secause there is a destination for cancer meatment that can make you feel lighter at near and better.
 Bacelli schafter patient, Denky Tamity Cancer Center, Bisbank, Californa, USA

". I was initially concerned about investing in Ambient Experience as we went into the project, but felt this was a good way to stand out in our market. Now, I tell overyone that Ambient Experience is the most impactful thing we did as a part of the total 59M imaging cepartment project — it has made a huge difference if cell, **Mavet Merket Conte**, us



With all the additional media coverage and pices, we feel Amb ent Expusience has provided us a substantial and very valuable amount of market awareness and adverting.<sup>3</sup> Tom Longram Executive Generations Director, Made Iseral and Vaccian Institute, Catholina, US

"The fact that we have provided (patients) with a distraction, or entertainment to take their mind of the radioactive agent is a really positive tining it gives them something clies to focus on " the Brace Care, space heath system, when a value of the source of the source terms that the source terms that the source terms that the source of the source terms terms that the source of the source terms terms that the source of the source of the source of the source terms terms terms to be a source of the source of the



### Media exposure

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# Room construction and renovation support

### **Turnkey Services**

For customers who select our CT, diagnostic X-ray, interventional X-ray, MR, and nuclear medicine products, Philips is proud to offer our new dedicated Turnkey Services team. You'll find our highly experienced, knowledgeable professionals understand all aspects of your construction and renovation needs.

### One program manager

Our Turnkey Services center on one dedicated program manager. Your Turnkey program manager collaborates with your local project manager and coordinates the Philips project team, which features licensed, insured, bonded and skilled subcontractors.

### One expert team

The Philips turnkey experts collaborate with your team to assess your project requirements, develop a scope of work, and complete the project from construction to installation.

We manage the design cycle utilizing experienced imaging system professionals who evaluate and understand the needs of your clinical staff. We reduce construction time by utilizing experienced imaging system subcontractors.

Along the way, we manage your project to assure competitive pricing, quality work and peace of mind.

One dedicated Philips program manager

Total project management

Improve project cycle time

Improve project cash flow

Simplicity of a single point of responsibility
One stop financing

The project costs and

timing are known up front Project change orders are

available

reduced

- Management of all project subcontractors
- Assurance that all contractors meet Philips selective criteria
- Complete project costs presented before the project commences
- · Full scope of work, ensuring all work is completed to specifications
- Management of contractor costs
- Competitive pricing





### Benefits

- We manage the design cycle, building permits and licensing, the construction schedule, all subcontractors, and verify site readiness.
- We offer consistently exceptional results through the efficient application of our turnkey expertise.
- We help improve cash flow one payment schedule for equipment and turnkey combined. No upfront costs for scope of work development, design, or bid documents. No administrative costs for progress billing from subcontractors and suppliers.
- Our One Philips approach brings the best out of the entire team. There is one point of contact for architects, contractors, project management, equipment delivery, installation, punch-list and turnover.
- Leasing available through Philips Medical Capital for equipment and turnkey services.
- Because your project costs and timing are known upfront, your project budget approval process is simplified.

Total project management - we handle it all!



Community Memorial Hospital (Hicksville, OH) took advantage of Philips Turnkey Services for their Panorama HFO MR system. From left to right, Rich Wharton (Philips) and MRI technologists Robin Morhart, Angel Stevens, Lori Peglow.

### Learn more

When you're ready to enjoy the benefits of Philips Turnkey Services, ask your Philips account manager for a quote.

Or, email Julie Gibson from the Turnkey team at julie.gibson@philips.com for more information.



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creative innovation for neattricare environments, services, and experiences

Leveraging strategic healthcare design thinking to create innovative and efficient environments and services for an exceptional experience focused on workflow efficiency. We inform strategic vision and planning by using e.g. experience flow mapping and stakeholder co-creation methodology.

Subsequently, we create world-class design solutions for a department or an entire health campus with a clinical performance and patient satisfaction perspective.

### **Key benefits**

- Experience flow mapping for a shared understanding, identifying key themes and opportunity areas
- Strategic and collaborative methodologies facilitate stakeholder buy-in
- Consultants with expertise in designing efficient and effective clinical environments

### Typical client needs

As part of expansions, mergers, or renovation plans, hospitals need to (re)evaluate the strategic fit of their services and environments. Our unique strategic and innovative approach as well as insights into clinical workflow, technology trends, and patient and staff experience enrich traditional facility design architects solutions and support longer term strategic planning and future proofed flexibility.

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### A strategic approach

A multidisciplinary team of experts will collaborate with patients, staff and key stakeholders to create exceptional healthcare solutions with a peoplecentric focus.

Analysis: A department or facility is assessed in terms of layout, clinical workflow, and performance. Market demands, qualitative and quantitative data, and patient and staff insights are gathered and analyzed for metrics-based change recommendations.

Strategy: We work with clients to understand their key transformational requirements and also bring datainformed and evidence-based external expertise into consideration. We create design directions that will help create a positive and efficient patient care environment

Design: We collaborate with client teams to develop design recommendations that support clinical efficiency and help enhance the experience for patients. family, and staff. Our co-creation process helps customers adopt change initiatives for new design solutions and processes. Our visualization and simulation tools help clients interpret transformational benefits.

Realization: Following the detailed specifications, steps will be carried out towards implementation including planning, creative direction, installation, technology implementation and support. For the physical environment we can provide our Ambient Experience room solutions.

### **Proven results**\*

Our consultants have helped hospitals and healthcare systems leverage design thinking to develop innovative solutions for an enhanced environment for patients and staff:

- The Broward Health Infusion Center was redesigned for modernized care and won the healthcare Avatar Award for continued experience improvements over a sustained period.
- At MedAustron, an ion beam therapy center in Austria, we evaluated the daily experiences of patients and staff and proposed an experience concept for the entire facility including the ion beam therapy treatment rooms. Our consultants focused on soft aspects of the patient journey and offered solutions for various spaces, making the treatment areas less clinical and more comforting and relaxing.

### Learn more

Through collaborative and peoplefocused engagements, Philips Healthcare Consulting Services can help develop innovative solutions to solve your most comptex challenges of care delivery. We can help you achieve meaningful and sustainable improvements in clinical excellence, operational efficiency, care delivery, and financial performance to improve value to your patients.

For more information, please visit www.philips.com/healthcareconsulting.

 Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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# Preface

Those responsible for operation and building technology in a hospital or clinic have a great responsibility for patients, staff and visitors every day. Supply of all forms of energy, climate control and cleanroom conditions for the surgery rooms have to be ensured 24 hours a day.

Increasing energy efficiency, reducing CO<sub>2</sub> emissions and saving costs have already become mandatory daily tasks of those responsible. In addition to this, technical malfunctions have to be detected on time and reported so that appropriate measures can be immediately carried out. Furthermore, constantly increasing requirements have to be met with the same number of employees or even less. This is impossible without integrated building automation systems. After all, hospitals are one of the most complex buildings.

The construction and maintenance of all these facilities require comprehensive knowledge when it comes to hospital building management.

This report describes the important jobs of modern building technology and integral building automation in hospitals for energy supply, energy efficiency, hygiene, comfort and efficient operation. It is intended to help you determine improvement potentials in your business and define priorities when renewing your systems.

We are one of the world's largest healthcare solution providers. Our customers profit from a global technology network and local support due to many branch offices with comprehensive experience n) the hospital sector. You too can reap the benefits of this knowledge!




# The healthcare sector is changing

The healthcare sector is facing a big dilemma. On one hand, the medical offering and patient care options are constantly being improved and new technologies are being introduced on an ongoing basis. On the other hand, the associated cost explosion is an increasing burden on both public and private investors, which is having a negative impact on health insurance premiums. The situation is amplified by the increasing life expectancy. In the western world life expectation is almost seven years higher than It was 50 years ago.

### Challenges

Constant cost pressure forces ongoing streamlining of operations to meet the face of increasing requirements.

In addition to this, conscientious use of energy has become a global responsibility, while at the same time becoming an economic issue in hospitals. The true task consists of combining energy efficiency with comfort and secure energy supply.





The increasing privatization of financing hospitals and clinics also serves to increase competition. The fight for solvent private patients has already started. Many facilities have to be renovated to gain leverage in this competitive environment in order to offer the required comfort and keep costs under control.

Those responsible for building technology in hospitals and out-patient departments are thus faced with having to prove themselves in this environment of increasing competition. Their objective is to ensure the best possible patient care (patient satisfaction) within a high-performance motivated organization (staff satisfaction) at justifiable costs (profitability) and a high standard of reliability (quality). The answer: integrated building solutions

Building technology is a key to success. It secures comfort, hygiene and the safety of patients and staff while allowing for streamlined operation and a high level of energy efficiency. Therefore, modern building and security technology is an important cog in hospital and out-patient department operation. In order to continue meeting increasing requirements with regards to energy supply, comfort, security and profitabil ity, the systems increasingly have to be integrated in a building. Networking all systems within the technical infrastructure such as heating, ventilation, air conditioning, access control, video surveillance, intrusion and fire detection, alarm and evacuation, ensures the highest level of comfort, optimum security and maximum energy efficiency. The systems can only reveal their true potential when all building technology systems work together in harmony.

With our Total Building Solutions, we provide a comprehensive solution from a single provider, which is precisely customized to fit the respective building and processes.

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# Energy optimization in buildings



## Energy-intensive processes in hospitals

Climate change necessitates new solutions for energy optimization. Among other things, these solutions are required to reduce greenhouse emissions. The European Union (EU) has set as its objective to reduce the energy consumption of buildings by 27 percent by the year 2020. In order to achieve this, modernization has to be accelerated and effective measures for increasing energy efficiency have to be limplemented. Electrical supply, media supply and air conditioning technology are all part of what makes a successful hospital. In addition to this, work that protects resources and cost savings contribute considerably to achieving business objectives.

The following figures clearly show the relevance.



Fuels are used primarily for heating and for producing warm water. Electrical energy is primarily used for lighting and ventilation. Together they are responsible for approximately 75 percent of a hospital's total energy costs. On average, German hospitals consume approximately 300 kWh thermal energy and over 100 kWh electrical energy per square meter.



Most hospitals share specific features that significantly impact energy consumption. Among other things, these include:

Heat requirements for producing warm water throughout the year with a temperature level that sometimes exceeds 60°C.

Often simultaneous requirements for heat and power.

Constant power requirement distributed over the course of a day and throughout the year.

Continual requirement for air conditioning. However, many hospitals have old systems in need of renovation. Thus, considerable savings potentials are left untapped. Practical examples show that savings of 25 to 40 percent are realistic after implementing the appropriate renovation measures.

Due to the fact that fossil fuels will only be able to be used to a limited extent in the future, hospitals are also faced with the issue of future energy availability. Running hospitals and out-patient departments require an uninterrupted supply of energy every day. This is even necessary to prevent life-threatening situations, as can be the case during surgery. We support hospital operators when it comes to the energy issue: by providing secure energy supply and distribution, via energy-saving contracting, via precise knowledge of consumption and optimization options with building management systems as well as via new, energy-optimized systems.

Lowered consumption of resources, longer system operation as well as better maintenance and repair of a device usually result in lower operating costs. If all these factors are taken into consideration, then the right decision has a positive impact on both the ongoing costs and the environment.



## Reducing CO<sub>2</sub> emissions

Global warming is presenting the world population with new challenges. In December 1997, the United Nations specified in the Kyoto Protocol that, in the period between 2008 and 2012, the industrial countries have to jointly reduce their greenhouse emissions by at least five percent compared to values from 1990.

## GreenBuilding program

We support the GreenBuilding program: This is a voluntary program initiated by the European Commission to improve energy efficiency and use of renewable energies in non-residential buildings. According to the "green book of energy efficiency", buildings make up 40 percent of Europe's energy requirements. Optimized systems alone represent a considerable energy-saving potential. This results in a reduction of energy costs and to an increase in competitiveness.

To be recognized as a GreenBuilding, operators must improve the energy efficiency of their building by at least 25 percent.

## Energy optimization for new and existing buildings

### New buildings

For new buildings, a comprehensive energy concept including costs, benefits, regulations and environmental friendliness should be created in the planning phase.

In this process, the costs should be viewed as part of the life cycle costs: procurement costs as well as the costs for system operation and upkeep. Therefore, an investment calculation has to be made for each component with consideration of the system's serviceable life. In addition to this, when planning a new building, current developments in building technology and regulations should be taken into consideration, especially when it comes to developments in the energy sector and the environmental friendliness of the materials used.

An overall building automation solution can serve to save energy both in the short-term and long-term. Additionally, modern technology improves comfort, operating costs and the fire safety and security of the building.



#### **Existing buildings**

In an existing building, energy cost savings can primarily be achieved if a sustainable energy optimization process is implemented with the customer. In Germany, for example, there is an energy cost saving potential in all hospitals of just under 232 million euros.

The energy optimization process mainly consists of monitoring, analysis and optimization. This process has to be carried out throughout the entire building life cycle so that achieved savings can be maintained and optimization potentials can be determined on an ongoing basis.

## Services for energy optimization

## # Energy monitoring

In order to be able to reduce energy consumption in a hospital, consumption first has to be measured. The measured data is subsequently consolidated and provides useful consumption values. In addition to this, the data provides information pertaining to costs and emissions. This, in turn, provides the foundation needed for making optimized decisions for longterm prolitability.

## 🕸 Energy analysis

Progressive technologies for energy savings have to be developed on an ongoing basis. We have the knowledge and the experience required to analyze a hospital's energy results in a meaningful manner comparing values to generate benchmarks, which can be used as the foundation for optimization.

## Energy optimization

Energy optimization is customized to meet the requirements of each hospital. It is based on the results of the energy measurements and subsequent analysis. This includes the optimization of hospital operation business processes.



## Energy optimization of partial and overall systems

Energy-optimized operation requires automated control and regulation as provided by modern building and room automation systems. Modern sensors such as gas mixture sensors for room air quality, and actuating elements for dimming lights instead of switching on and off are constantly being improved. Sensors and actuators can be networked using modern bus systems, which serves to simplify installation. In addition to this, users and operators can simply change target values if needed.



#### Integration

Modern building automation and control systems such as DESIGO<sup>TM</sup> allow for permanently optimized individual processes such as ventilation, air conditioning, shading or lighting in hospitals. At the same time, DESIGO supports efficient management of the individual components with regards to both economical and ecological aspects by networking partial systems within an overall system.

A user-friendly interface can be used to monitor all partial systems such as heating systems, ventilation and air conditioning systems, lighting, shading and, when using our Total Building Solutions, fire safety, access control and security systems. The system is based on modern communication technologies and standard building automation protocols, which means third-party systems can be integrated more easily.

Changes of use, extensions or modernization of a partial system can be carried out incrementally and at any time. The systems grow with the requirements and can be extended as needed from a small system to complex and distributed building automation systems. Equipped with IP technology and open databases, these building automation systems are safe, value-retaining investments. Our migration concept includes the various service lives of system components. This meets the requirements for step-bystep system renewal – modernization by replacing existing applications in several migration phases – as well as a long support time for existing systems. In addition to this, it allows the hospital business to increase its competitiveness by implementing new technologies. Minimizing the technical risk reduces down times and increases the hospital's quality of business.

### Standard protocols integrated In our building automation

Standards for building automation have existed since 1990 in Europe and more recently worldwide. The objective consists of securing product quality, specifying project specifications for building automation and allowing for proving the energy efficiency of building automation functions. Promotion of device interoperability is intended to enable a wider range of functionality with a better price-performance ratio. Building automation functions should be established as a new "construction task" and the costs for this should be paid appropriately. The result of this work is the EN ISO 16484: It serves to standardize building automation as a service in the member states of ISO and CEN. European regulations require that standards accepted by CEN have to be implemented in all European countries – not only in the EU countries – and national standards have to be withdrawn in cases of conflict.



## We use international standards in our systems:

#### I BACnet™

The Building Automation and Control Network (BACnet) is a data protocol used around the world for interoperable communication between building automation and security technology products and systems. Communication is carried out via standardized transfer media, which are primarily Ethernet, IP and MS-TP In Europe. BACnet became EN ISO standard 16484-5 in 2003 and this standard is continuing to be developed in various work groups. Our technologies support the use of BACnet.

#### KNX

The abbreviation (pronounced "Konnex") stands for mature intelligent networking of modern building technology according to EN 50090 and ISO/IEC 14543 and is used throughout the world. KNX is implemented in integral room automation for local networking of sensors and actuators.

We also support other industry standards:

#### # LONMARK<sup>™</sup>

This is the interest group consisting of companies and institutions around the world, dealing with interoperable products based on the Local Operating Network LON from Echelon<sup>®</sup>. LON is implemented in integral room automation for local networking of sensors and actuators.

Open Process Control (OPC) This is a standardized software interface, which allows applications from various different manufacturers to exchange data via Windows-based operating systems. It is now also supported by .NET, but this requires changing the application software for OPC.

Due to the multi-platform approach with BACnet, LON and KNX integration, the DESIGO building management system provides the information from all technical areas. This information can even be colled up from remote locations using Web technologies. This enables the storage and reporting of energy consumption measurements on our Web server and the respective reports can be called up via a browser or via m-mail.



#### Integral room automation

Room automation describes the integral control and regulation of all systems in a room such as lighting, light directing, heating, cooling, ventilation and multimedia devices for audio or video. Integral means that the individual devices in a system are embedded, can exchange information and have a unified user interface. Conceptually, the process to implement an integral icom automation system begins in the planning phase. Today planning is carried out using room modules to meet the requirements for high flexibility in provision of the currently required room requirements. A room module represents the smallest possible unit, which is combined with other room modules to result in the actual rooms required.

In cases of room modifications, the building technology is adjusted to suit its new function solely by way of software changes. Practical experience has shown that even highly complex buildings can be reduced to a few types of rooms. This results in standardization and simplification of planning, execution and operation. In addition to an increase in comfort and flexibility, integral room automation offers additional potential for energy optimization. Significant potential can be used via the interaction between the systems. Example: The lowering of blinds responds to data received from the weather station as well as the room temperature, which was previously used only for individual room regulation of heating and ventilation. Thus, the sun's thermal energy can be used more efficiently in the winter, for example.

### DESIGO – for a feeling of well-being in the building

The requirements placed on advanced building automation and control systems are demanding: Reliability is a standard feature now and energy efficiency and cost optimization in buildings are mandatory. DESIGO – our building automation and control system – satisfies these requirements in superior style. DESIGO creates comfortable working conditions in a building while

## giving consideration to economical and ecological criteria.

The system performs its control, regulating and monitoring tasks automatically and elegantly in the background. DESIGO is not confined to heating, ventilation and air conditioning, but is also a comprehensive and integrated system for building management covering all kinds of building services, such as lighting, blind control, safety and security, access control and energy distribution.



## Optimizations for electrical installations

Good building lighting and lowering of blinds can contribute to reducing energy requirements on a long-term basis.

## Lighting

The efficiency of lighting can be increased by using the appropriate lighting elements such as replacing tungsten bulbs by fluorescent lamps and the use of LEDs is also becoming increasingly attractive in this regard. Additionally, efficiency can be increased using modern operating devices such as electronic ballasts as well as highly effective lamps.



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Furthermore, energy-saving potential can be found in the switching and classification of lighting groups to meet specific requirements. Halls or similar rooms, which are rarely used, should be equipped with motion detectors. In addition to this, the use of light guidance systems allows for better use of daylight, which can reduce the artificial lighting required in a room.

Building automation can be used to control lighting sources so that they

are automatically dimmed when more daylight enters the room. This ensures that the brightness meets the respective requirements and reduces power consumption to a minimum.

Additional energy reductions can be achieved using light room design: A high degree of reflection from ceilings and walls results in less energy consumption with the same amount of light.

#### Lowering of blinds

The facade of a building contributes to its heat and provides protection from environmental influences. For a room in the building, the lowering of blinds should provide optimum sun protection, while using the light without a blinding effect and ensure that heat is obtained without overheating. These requirements, some of which are contradictory, require good control systems which master the interaction between room and facade.

## DESIGO RXC - the integrated room automation solution

The room management system DESIGO RXC enables individual comfort requirements for the building occupants. The room controller and the room devices regulate, control and monitor the comfort conditions in rooms and closed zones. Open communication based on LoNMark technology allows for integration in any building automation system. The building technology applications for heating, ventilation, air conditioning, lighting and blinds for example can be modified on a project-specific basis. Simple installation and wiring offer saving potential with a high-quality standard.

## Energy-saving performance contracting

Operators can multiply their benefits with energy-saving performance contracting: Modernization and optimization of the building technology save energy and operating costs, increase operational safety, raise the level of building efficiency and make a positive contribution to environmental protection. Return on investment is guaranteed by savings on energy and operating costs.

### Financing model

The financing model guarantees that, from the beginning of the guarantee until the end of the contractual period, all required saving measures are financed and additional savings are distributed among the partners. We assume responsibility for savings that are not attained. After the end of the contractual period, the hospital profits 100 percent from the reduced costs.



Energy-saving performance contracting in practice

The out-patient center Bremerhaven-Reinkenheide GmbH in Germany was built in 1975. At the beginning of 2006 it sought an energy-saving performance contracting partner throughout the EU. The reasons: aged building technology, increasing energy costs and the health reform, which increased the requirements of quality, profitability and intensification of competition.

We invested approximately 7.2 million euros in renewing the energy systems. This served to decrease energy consumption on a long-term basis and the energy costs compared to the year 2004 were reduced by 40.5 percent. In addition to an entirely new building automation system, the out-patient center acquired new air conditioning and ventilation systems, and optimization of the heating systems. Further efficiency measures were carried out in the area of steam and water, and the main low voltage distribution, the cafeteria kitchen dishwashers, the steam sterilizers, the medical compressed air supply and the cooling system were fully replaced.

The out-patient center achieved part of the savings using two block heating power generators, one module of which operated using vegetable oil. The investments finance themselves over a contractual twelve year period from the saved energy costs. "This more than met our expectations. We are not only getting modern system technology, but we are also saving the environment more than 3,200 tons of carbon dioxide emissions", says Järgen Breuer, technical director of the Reinkenheide clinic.

Facts and figures Bremerhaven-Reinkenheide

Si Components: investments, mainte-

- nance, servicing and financing
- Contract duration: 12 years Guaranteed energy savings:
- 520,000 euros per year (40.5 percent)
- Emissions savings: 3,200 tons of CO<sub>2</sub>



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## Electrical energy distribution with Totally Integrated Power

Secure and consistent solutions are required for electrical energy distribution in buildings. Our offer is called Totally Integrated Power. This consists of consistent, interface-optimized products and systems, which are ideally matched to one another and complemented by communication and software modules, which connect the energy distribution to the building automation.

The portfolio ranges from planning tools to suitable hardware: from switching systems and distribution systems for medium voltage, transformers, switching and protection devices as well as switching systems and track distribution for low voltage through to small distribution units and power outlets. Both the maintenance-free medium voltage and the low voltage switching systems as well as the track connections are matched. Overall protection systems ensure protection for people and systems at all times.

Building operators can use Totally Integrated Power to optimize their operating costs while retaining a high level of flexibility for changes of use.



## This is carried out by way of the following:

- II Transparency of the energy consumption and thus optimization of the energy costs. Connection of power consumption devices to bus systems provides the required data. Energy management provides transparency of energy costs and subscription agreements can be negotiated optimally.
- A high level of operational safety and connection of the energy distribution to building automation. Central operation serves to reduce downtimes and keep costs to a minimum. In a selective design, only the affected units are switched off in cases of errors, and modular systems allow for simple and fast replacement.

Consistent energy distribution at the workers' compensation insurance accident clinic in Duisburg, Germany

In the healthcare sector, "power quality" is a decisive element of patient care. Highly sensitive devices, the proper functioning of which can only be ensured by a high-quality power supply, are used for modern diagnosis and in life-saving measures. Poor power quality or a power failure would have disastrous effects. For example, a secure and reliable power supply could no longer be guaranteed. Totally Integrated Power ensures the highest standard of reliability in energy distribution. We provided the following for the workers' compensation insurance accident clinic in Duisburg:

Dimensioning of energy distribution with SIMARIS design

- SIVACON low voltage switching systems with communication via Profibus DP
- MAIpha low voltage sub-distributor
- Delta switches and power outlets
- Building automation including lighting control







In a hospital, hygiene is a daily challenge: New patients, visitors and personnel enter the hospital every day. They all bring invisible viruses into the hospital. Food and other goods are also delivered on a daily basis. It is impossible to keep a place with so much contact and motion free of germs! According to a specialist medical study eight to twelve percent of hospital treatment procedures are hindered by nosocomial effects or, in other words, infections acquired in the hospital.

Room ventilation systems in the hospital serve to maintain the required thermal room climate, extensive filtering of microorganisms and dust, anesthetic gases and odors in the air as well as the dissipation of heat loads. Here it is of utmost importance that the thermal effects and pressure effects remain under control at all times especially in surgery rooms. Air currents traveling from one area to another can be especially dangerous for hygiene. For example, construction dust has a high percentage of fungus spores. Therefore, construction measures in hospitals have to be especially carefully planned. It pays to spend a bit more on construction separation measures.

### Danger posed by legionella

Legionella are bacteria primarily found in water and damp environments, and thus they are found in building technology systems. They are a natural component of the microflora of water. Drinking water from the local water supply lines always contains a limited number of different bacteria. This could also include legionella in exceptional cases.

The multiplication of these represents a hygiene risk and this can be caused inside buildings if water stagnates and is warmed. Warm water systems are thus to be installed and operated so as to make legionella multiplication impossible.

# Hygiene in the operating room

The highest level of hygiene regulations apply especially in operating rooms. The smallest particles of pollution can have the hardest consequences here, such as when contaminants enter a patient's wound.

## Low turbulence displacement currents

Low turbulence displacement currents are supplied to the operating room via a ceiling vent. It is especially important here that the room temperature is higher than the temperature of the supplied air. This causes the supplied air to be moved down by the thermal effect and ensures a high level of hygienic safety. The operating and instrument tables are shielded from microorganisms in the air by the low turbulence displacement current. With this type of ventilation, the risk is low that germs from the outside will enter.



## The right temperature at all times

The temperature of the supplied air is important for the comfort of the team of surgeons. In operations requiring great physical effort such as inserting a hip prosthesis, the team of physicians often requires a cooler temperature than in relatively finer operations. In the past, the temperature in the operating room was regulated directly from the room and the guideline was  $21^{\circ}C + 3^{\circ}C$ . Today, the temperatures are set from the control center. Key figures are individually allocated to each surgeon, so that each person can work in an environment matching their preferences.

## Humidity and dust

Relative humidity also plays an important role in the air quality. Most people perceive relatively dry air to be uncomfortable: Studies have revealed that air with a higher level of humidity than the reference value of 30 percent can be experienced as too dry by tested persons.

However, an increase in humidity can also prove to be problematic. If there is too much humidity, mildew develops at places where water stands and especially in showers and baths. Fungus spores are not dangerous for people with intact defenses. But patients in the hospital often do not have sufficient defenses. Therefore, good air exchange with clean filtered air is more important than humidity for health. Two outside air systems should be installed to ensure fresh air circulation during ongoing hospital operation. This increases the security in the case of failure and in cases of regular maintenance work.





The goal of the validation is to establish documented evidence which provides a high degree of assurance that a specific requirement or process will consistently produce a product meeting its pre-determined specifications and quality attributes. For example, the manufacturing of medicines has to result in germ-free products with a high level of reliability (1:1,000,000). The quality requirement for validating the sterilization process is specified in various different ordinances. For example, in Switzerland it is contained in article 19 of the medical product ordinance from the year 2001: The operator of a hospital is responsible for correct validation. This primarily means that the representative loads in routine operation have been validated.

The operator of the sterilizor has to have specified in advance how and to what extent the contents and the spatial arrangement of his production batches vary. The process owner is always responsible for the overall validation and the result of these batches, even if the validation work was done by an consultation or subcontractor.



The validation of sterilization processes is specified in the EU. In addition to this, hospitals are subject to the legal order to ensure patient care according to the state of technology and science.

The EU directive serves as a legal framework. Performance and security-related product specifications are not regulated by the law. This is regulated in the ordinances of the "general requirements of the EC medical law", the fulfillment of which is to be proven. Within the framework of picking, a series of preliminary conditions have been specified as mandatory specifications in attachment 3 of the directive of the Germany Association for Hospital Hygiene for the validation and routine monitoring of starilization processes. These basic requirements apply atross products and processes and are based on the respective state of technology.

Based on the example of the sterilization procedure, success cannot be confirmed with the final product due to security requirements. It has to be ensured that the entire process and its important parameters beginning with preparation and packaging of the sterilization of the product through the required interim steps of sterilization, release, storage, distribution, documentation including the required devices, equipping and certifying personnel are carried out with quality assurance according to a validated procedure.



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# Focusing on the patient



# Comfort and efficient operation

Competitive pressure will increase and hospitals are increasingly trying to attract patients. This is especially true of the demanding target group of private patients. Upon making their selection, patients are paying more and more attention to the overall offering of a hospital: good medical care, the competence of physicians and care personnel and a high level of comfort are all included in their decision process. Key factors include room furnishings, care, communication and entertainment offering and individual support.

Patients covered by social insurance also require a certain standard when it comes to the infrastructures in hospitals. The patients want to have many of the conveniences of their daily lives in the hospital as well.







## Means of communication available at all times

Means of communication, which are available at all times, have become a matter of course. For patients it is especially important to keep contact with the outside world. Many family members now have jobs and cannot always make visits to the hospital so that the telephone is often the only means of communication. A large percentage of patients do not want to lose the connection to their own workplaces either. They keep relationships with employees and customers afloat via telephone and e-mail contact. Hospitals, which take the aspect of comfort and comprehensive services into consideration, will win market shares in the long run.

## Individual control

Integral room automation provides a high level of comfort. This is because it can be adjusted to suit patient requirements. In addition, it can be regulated individually for different processes such as operations for example. Depending on the function of a room, the requirements of the climatic conditions such as temperature, lighting, ventilation and humidity can vary widely.

### An emphasis on people

On one hand, the function of the room determines the requirements and, on the other hand, people and their individual requirements have to be taken into consideration. A room automation system can be used to control the climatic conditions, the lighting and the sun protection of each individual room. If, for example, less light comes through the window, then the artificial lighting is automatically brightened. Thus, many of the human needs and the technical requirements in all rooms are automatically covered without the personnel having to take care of it.



On the cutting edge: the hospital da Luz in Lisbon – a complete integration solution

The most modern concepts of digital networking have been implemented in the hospital da Luz in Lisbon, Portugal. This includes patient terminals in all patient rooms. In addition to room control, the terminal provides access to patient files, which can be called up by the physician and care personnel after entering proper identification. In addition, telephone, television and e-mail are integrated as means of communication and the patients can also use entertainment options such as video on demand, Internet or radio and games.

# Operation in modern operating rooms

In an operating room, numerous regulations and standards pertaining to building technology have to be adhered to. The rooms require the highest standards of hygiene and security of the technology as well as simple and safe operation. The schedule of an operating room, for example, has to be adjusted to the respective procedure each day and emergencies can necessitate changes to the plans. This task as well as other important coordination activities is often carried out in a central operating room control center. In addition to implementing regulations and standards upon installation of the various systems, the operating rooms have to be simple to operate by various different users such as surgeons, assistants, operating room care and cleaning staff or technicians. Therefore, graphical user interfaces are increasingly being used in the operating room as an interface between people and technology. These can be adjusted individually to suit the different needs. Operating environments such as heating, ventilation, cooling, sanitary and power supply are displayed via a unified interface on a touch panel.



Scenarios defined for different types of operations can be used to operate all building technology. Thus, the operating room can quickly be switched from one scenario to another with regards to ventilation or lighting in a targeted manner such as when switching from an endoscopic operation to another operation.



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# Integral operation of other rooms

Modern conference rooms and lecture halls are equipped with audio/video systems, which can include video cameras, PCs, microphones, systems for video conferences, projectors and plasma screens. However, a successful presentation not only requires modern media technology. The integration of building technology is required to make conditions for the speaker ideal. The media components and the building technology can be operated in the rooms directly via a touch panel, a PC or switches. At the tap of a finger, one can activate all switching and control procedures and view the current ambient status at a glance.



Depending on the system components, the user of a room can request help from the administrator by simply pressing a button. The administrator can respond to this call for help by sending a predefined message to the room or by immediately forwarding an e-mail to the person responsible for this room such as the janitor or technician. The administrator also has access to the devices at any time. Modern software logs all procedures, which simplifies the work required for system support.

## Music for relaxation

Music in public spaces has a calming relaxing effect. The music server is connected to the central control unit. Thus, it is possible to select between music that has already been set or receiving digital radio. Depending on specific needs, the music, volume and sound can be set or switched off in individual nooms.



# Ensuring security through traceability



# Security as a major challenge

Safety is a major challenge in hospitals. This includes the traditional tasks of fire safety and security, but also several environmental conditions: data pertaining to the air quality, heating or cooling as well as the storage of critical and specific hospital items and medicinal products, e.g. blood, cell or tissue samples, have to be archived in a traceable manner. In addition to this, the temperature, humidity, pressure, and particle and gas contents in the air have to be controlled. In cases of deviation, alarms have to be sent and imnediate intervention has to be ensured.





## Knowing when an item was in a location

Data recording during preparation and actual deliveries is carried out with precise time entries about the procedure. Thus, it is possible to determine the exact

path taken by the respective items or the process such as cooling and humidifying: When was the item ready for delivery? When was it received by logistics? When was it provided to the recipient? At which operating temperatures was it stored? How long was it stored? Target and actual

values are compared and stored on an ongoing basis. This serves to protect patients and personnel and operate hospital processes in an efficient and safe manner.

The introduction of legal stipulations requires a need for action in logistics departments as well as in the hospitals' integrated processes: declaration regulations require specification of origin and information pertaining to the means of production. Replicable and standardized quality as well as traceability serve as a foundation for so-called "Good Manufacturing Practices" and serve to make medicines more controllable.

In medicine therapy, there is a trend to return to patient-specific production. This has to be documented, reproducible, standardized and validated so that the security of the manufacturing process, the quality and the control can be guaranteed.

## Traceability via the Siemens Infocenter

The Infocenter is an overall system designed to monitor hospital operation and its processes. All relevant hospital data is saved, which guarantees traceability. In the analysis process, all available data is processed to form meaningful information. The system offers data evaluation, statistical evaluation of values and customer-specific reporting options. Among other things, the solution can monitor critical processes, storage of the hospital inventory such as food, blood or tissue samples as well as medicine and treatment research. If needed, the Infocenter triggers alarms and creates reports. Furthermore, this solution ensures that the data cannot be subsequently manipulated.



Modern technologies can significantly support the efficient and safe operation of a hospital: The supply security and comfort for patients and personnel can be improved. Energy efficiency can be increased by way of streamlining processes and resource management and system operation can be optimized using integrated management systems and professional facility management.

Danger alarm systems work even inore precisely with new sensors and IT technology. Subsystems are linked intelligently by way of networking. All important systems have to be able to be redundant and data protection is subject to the highest requirements.

The systems can reveal their true potential when all building technology systems work together in harmony. Optimum security, maximum operating efficiency and the highest possible comfort are then guaranteed. We enable full use of synergies with our integrated building solutions. We offer a comprehensive product range as well as proven services and solutions, which are exactly customized to meet the needs of each building and the processes integrated therein.

More than 1,500 reference systems in the European healthcare sector serve as evidence of our extensive practical experience with the requirements of hospitals – we provide well-planned customized solutions that are modular and scalable. With a tightly woven service network, we provide our customers with a long-term effective contribution to future-oriented healthy development of operations.

Use the support from a single source by our specialists with global experience in the hospital and out-patient care sector to find, install, operate and finance the hest possible solution for your business.

# Do you have a need for action?






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Control of heat and cooling distribution for HVAC applications (excl. processes)	Manual	Constant tem- perature and volume flow (24/7) accord- ing to outside temperature	Supply tempera- ture and volume flow with room thermostats	Temperatures and volume flow con- trolled dependent on demand (of user) and weather with room thermostats and night setback	Temperatures and volume flow controlled depen- dent on demand (of user) and weather with room thermostats and night setback with self learning controls
Optimization of the light control	Manual on/off	Time switches	Motion detectors and time switches	Motion detectors and time switches with individual schedules	Individual day light con- trol incl. motion detectors and centralized lighting control for common areas and outside lighting
Énergy transparency	No consideration	Manual re- cording of bill- ing data, e.g. energy and water, yearly resolution	Manual main meter energy and water billing data, manual weather adjusted, monthly resolution	Automated main- and sub-meter data incl. weather adjustment, weekly resolution	As mentioned before plus energy budgets for dedicated areas or plants incl. automated alarming
Control of air conditioning system	Manual	Constant temperature and volume flow (24/7)	Constant temper- ature and volume flow, timer-con- trolled	Constant tempera- ture and volume flow, timer-con- trolled, performance monitoring	Demand-controlled ventilation depending on CO <sub>2</sub> and temperature level incl. performance monitoring
Efficiency components	< 60%	60 - 70%	70 - 80%	80 - 85%	> 85%
Degree of building technology	Not used	Rarely used	Used 3 – 4 times a week	Daily usage, regular updates	Pro-actively used, evalu- ation of trend data, de- duction of optimization measures
Optimization of the warm water consumption	No consideration	Constant WW- recirculation	Electric tracing	Optimized volume flow with constant WW-recirculation	Optimized volume flow with electric tracing
Efficiency cooling plant (chiller, pumps, cooling tower) – COP <sup>5</sup>	< 2	2.1 - 2.5	2.6 - 3.5	3.6 - 4.5	> 4.5
Efficiency heating plant (boiler and pumps)	< 60%	60 - 70%	70 - 80%	80 - 85%	> 85%



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### Workflow Simulation:

Predictive modeling of healthcare processes using a digital twin of your institution

Workflow Simulation brings together all the essential planning elements in a victual environment; 3D layout, dimeal processes, and performance parameters

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scientific research and in laboratory analysis for the diagnosis of diseases, chemical preparations in the nature of medical or veterinary diagnostic reagents and assays for testing bodily fluids, tissue samples and other samples of the body; chemical substances for analyses in laboratories, for medical purposes; chemical reagents for medical or veterinary purposes; medicated hair serums, medicated serums for the treatment of cancer, oncology and immunotherapy, blood grouping serums and blood typing serums, namely, medical reagents and assays for testing blood to determine blood type; diagnostic preparations for medical or veterinary purposes; diagnostic preparations for veterinary purposes; diagnostic agents for pharmaceutical use; clinical diagnostic reagents for medical or veterinary purposes; medical diagnostic test strips for blood analysis, urine analysis, saliva analysis, liquor analysis, stool sample analysis, analysis of bodily fluids, analysis of cell suspensions, pregnancy testing, fertility testing, blood sugar testing, infectious disease testing, testing of hemostasis disorders, therapeutic drug monitoring, drug abuse testing; disinfectants; dental preparations and articles, namely, dental ceramic blanks, material for adhesively bonding ceramic parts and teeth, material for stopping teeth, and matte paints for optically matching teeth, namely, color stains for dental laboratory and direct restoratives being color modifiers for dental use in the form of dental lacquer and dental varnish for use by dentists

IC 009. US 021 023 026 036 038. G & S: Apparatus for vehicle navigation; radar apparatus; shortwave transmitter and receiver stations, for radio communication; aeronautical radio communication

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apparatus, namely, radio transmitters and radio receivers; microwave radios; satellite radio equipment, namely, satellite radios; encoding apparatus; thermal imaging systems not for medical use; laser distance-measuring apparatus; inquiry and response apparatus for aircraft identification, namely, air traffic control radio equipment; equipment for receiving, locating and classifying electromagnetic signals; equipment for traffic navigation on land, water and in the air, namely, GPS navigation devices; traffic decoders; pilot computers; on-board computers; airbag and tire diagnosis apparatus, namely, level gauges, automatic indicators of low pressure in tires; vehicle fleet management apparatus, namely, GPS tracking devices; temperature probes for scientific purposes; electrical cable harnesses; motor and engine control devices namely, electrical controlling device featuring computer hardware and software for vehicular control, namely, hardware and software for ignition control; electric positioners, namely, electric positioning apparatus and instruments, electronic navigational and positioning apparatus and instruments, and electronic control apparatus for valves, namely, electric positioners in the nature of sensors for determining position; electroacoustic apparatus, for conferences, for sound and video studios, namely, electroacoustic transducers, loudspeakers, headphones, microphones; sound and video sending and control installations, namely, apparatus for recording and transmitting sound and video; apparatus and equipment for cable television, and devices constructed therefrom, namely, cable television converters, cable television transmitters, receivers for receiving cable television; photographic and cinematographic apparatus, namely, cameras; loudspeakers; speaker enclosures, microphones, headphones, electronic amplifiers for use with musical instruments; structured semiconductor wafers for the manufacture of electronic components; apparatus and equipment for the recording, processing, storage and reproduction of radiological information, namely, x-ray apparatus not for medical purposes, computer hardware for use in connection with radiological devices, computer software for use in connection with radiological devices to record, process and analyze imaging data, apparatus and equipment for the recording, processing, storage and reproduction of radiological information, namely, computer hardware and software for recording, processing, storage and reproduction of radiological information for medical and non-medical purposes; vibrotactile communication electronic components, namely, touch screens for use in applying tactile stimulation to a person for providing tactile, touch, haptic and force feedback sensations to the skin surface, namely, electronic vibrotactile stimulator apparatus for transmission of communication for use with remote control or medical procedures; electric current collectors; lambda probes for scientific purposes; scientific research and laboratory apparatus, educational apparatus and simulators, namely, audiovisual teaching apparatus in the nature of audio and video recorders, video cameras, audio and video projectors, audio and video transmitters and receivers, and computer display screens, microcomputer emulator, medical diagnostic simulators for use as teaching aids in imaging procedures, educational computer software and computer applications for mobile devices, namely, computer programs for providing information in the field of medicine scientific apparatus, equipment and instruments for performing analyses in laboratories, namely, research laboratory analyzers for measuring, testing, and analyzing blood, urine, liquor and other bodily fluids, tissue slides and other tissue samples, medical laboratory research instruments for detecting pathogens, measuring compounds in samples, determining the activity of compounds in samples, DNA or RNA analysis, determination of nucleic acid or peptide sequences; laboratory apparatus, namely, laboratory devices for detecting or determining genetic sequences, bioreactors for laboratory use, pipetting instruments in the nature of pipettes, and centrifuges; laboratory filters, laboratory trays; recorded content, namely, computer software for recording and analyzing lab results; devices for conducting electricity, namely, electricity distribution consoles; information technology and audiovisual equipment, namely, audiovisual receivers and transmitters, computer terminals, computer hardware and computers; magnets, magnetizers and demagnetizers; measuring, detecting and monitoring instruments, indicators and controllers, namely, electronic controllers for control of laboratory apparatus, temperature monitors for laboratory use; optical devices, enhancers and correctors, namely, optical semiconductor amplifiers, optical condensers, optical disk drives, optical disk readers and optical fibers; safety, security, protection and signaling devices, namely, security alarms; electrical adapters, electric batteries, electric alarm bells, electric installations for the remote control of industrial operations, electrical connecting parts. namely, electrical connectors, electric batteries, contacts, electric, electric couplings, electrical conductors, electric conduits, electric relays, electric, electronic locks, coils, electric, electricity transformers, electronic monitors for monitoring electrical signals, electrical resistances; electric signaling, measuring, checking, counting, registering, monitoring, control, regulating and switching apparatus, namely, electrical switches, electrical controllers, signal transmitters and receivers; electrical control devices for input, processing, transmission, storage and output of data; data processors and computers and computer peripheral devices therefor; all of the aforesaid goods for data communications via cable and wireless

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telecommunications networks, for remote data transmission and for data transmission on local networks; electricity transformers; computer programs for data processing; software for electromedical imaging apparatus; data processing programs; computer monitors, LED monitors, LED monitors, baby monitors, television monitors, video monitors; x-ray tubes not for medical purposes; detectors, namely, carbon dioxide detectors, carbon monoxide detectors, fire and smoke detectors measuring fluorescent or chemiluminescent signals, radiation detectors, motion detectors, radar detectors; devices and screens for protecting against x-rays, not for medical use, namely, radiation shields for electronic products; wafers for the manufacture of electronic components; laboratory robots for medical purposes

IC 010. US 026 039 044. G & S: Apparatus and equipment for recording, processing, storing and reproducing medical images, namely, medical imaging apparatus, medical ultrasound apparatus, medical imaging transducers; electromedical apparatus and equipment, installations consisting thereof and parts therefor for x-ray diagnostics and x-ray therapy, namely, x-ray apparatus for medical purposes, medical radiation apparatus, and structural parts therefor; medical angiography apparatus, medical cardiography apparatus, namely, heart monitors, medical radiological apparatus; medical equipment for digital image recording, for contrast medium analysis with real time image reproduction, namely, electromagnetic medical diagnostic imaging apparatus; instruments and apparatus for endourological radiology, functional diagnostics and instrumental urology and for extracorporeal destruction of urinary and biliary calculus, namely, medical diagnostic radiology apparatus for endourological radiology, and medical ultrasound devices in the nature of ultrasound imaging apparatus; medical devices for treating bone, muscle and tendon disorders; apparatus and equipment for recording, processing, storing and reproducing radiological information, namely, radiological apparatus for medical purposes; medical and electromedical apparatus, namely, medical computed tomography apparatus, medical magnetic resonance tomography apparatus, magnetic resonance imaging apparatus, ultrasound diagnostics apparatus, radiotherapy apparatus, positron emission tomography (PET) therapy apparatus; medical and surgical cyclotrons for the production and processing of positron emitting radionuclides; apparatus for ECG long-term storage and computerized ECG evaluation, namely, electrocardiographs, electrocardiograph recorders, and electrocardiograph apparatus incorporating medical computer software to record, process and analyze ECG data; equipment for high-frequency heat treatment, electrosurgery, diagnostics and therapy, namely, high frequency electromagnetic therapy apparatus; measuring apparatus for cardiac catheterization; medical apparatus for monitoring the vital signs of patients and analyzing arrhythmias; medical apparatus for polygraphy and electrophysiological examinations; measuring stations for medical functional analyses, namely, arterial blood pressure measuring apparatus, blood pressure measuring apparatus, devices for measuring blood sugar, devices for measuring intracranial pressure; cardiac pacemakers and defibrillators; telemetry apparatus for medical use; equipment for respiratory technology, namely, apparatus for artificial respiration, respiration monitors, nebulizers for respiration therapy; lasers for medical purposes; catheters; linear accelerators for tumor radiotherapy; equipment for the localization of tumors, namely, mammography apparatus, linear accelerators for tumor radiotherapy, tumor localization devices, dosage planning devices for tumor radiotherapy; apparatus for dosage planning and the documentation of tumor radiotherapy; dental treatment apparatus and lights for working areas, namely, intra-oral dental light system; medical and surgical drilling apparatus for use in preparation technology, namely, drills for dental applications, drills for surgical applications; dental turbines; ultrasonic equipment for removing tartar, namely, ultrasonic cleaning instruments for dental use during dental procedures; medical diagnostic equipment for analysis of the paradontium; apparatus for the computer-aided manufacture of ceramic fillings; equipment for the hard of hearing for diagnosis, therapy and teaching purposes, namely, ear trumpets, assistive listening devices for the hearing impaired, wireless transmitters and receivers for use with hearing aids, sound processors adapted for use with prosthetic hearing devices, medical hearing instruments and structural and replacement parts of such devices, cerumen protection systems; medical hearing aids, medical hearing aids incorporated into spectacles, audiometers and hearing testing cubicles; hearing and speaking equipment and special equipment for hearing-impaired children, namely, assistive listening devices and voice amplification devices; medical furniture, namely, patient positioning tables, examination and operating tables, cerumen filters for medical hearing aids; electric apparatus for cosmetic purposes, namely, massage apparatus, medical radiation apparatus, electrically operated apparatus for diffusing inhalants; medical equipment, namely, light screens for medical purposes; radiography apparatus for imaging plate technology; x-ray tubes for medical purposes; ; furniture adapted for medical use; furniture especially made for medical examinations and treatments; tables for medical use; beds for medical use; seats for medical purposes; beds adapted for medical use; blood testing apparatus; urine

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10/25/2018

analysis apparatus, namely, glass slides, cups and bags for collection of urine; protective devices and protective screens for protecting against exposure to x-rays, for medical purposes, namely, patient x-ray radiation shields; medical apparel, namely, surgical scrub tops, surgical scrub pants, body suits for babies, surgical gowns; cases and bags especially for medical apparatus, equipment and instruments, namely, cases fitted for medical instruments and medical bags adapted for and sold with medical, surgical and veterinary instruments; instrument cases fitted for medical instruments, for use by surgeons and doctors; medical functional and work clothing, namely, medical gowns, patient examinations gowns

IC 035. US 100 101 102. G & S: Business consultancy and advisory services; business management; business planning services; strategic business services, for others, namely, business strategy development services; business consultancy for medical facilities and clinics; management of health care clinics for others; provision of business statistical information relating to medical matters; medical billing; compilation of medical examination reports, namely, compilation of medical examination reports into computer databases for business purposes; compilation of statistical data relating to medical research for business purposes; advertising for others in the field of electrical engineering, electronics, information technology and medical technology; office machines and equipment rental

IC 037. US 100 103 106. G & S: Construction of medical establishments; maintenance, servicing, repair and installation of medical instruments, apparatus and equipment; maintenance, servicing, repair and installation of diagnostic instruments, apparatus and equipment; providing information relating to the repair or maintenance of medical machines and apparatus

IC 042. US 100 101. G & S: Research and development, for others, in the field of electrical engineering, electronics, information technology, medical technology, physics, chemistry and mechanical engineering, and technology planning, technical consultancy, and technical quality monitoring in these fields; construction drafting and design planning of medical installations and consultancy in the design of medical installations; computer programming; rental of electrical engineering, electronics and information technology products and installations, namely, computer hardware, computer software, and computer peripherals; material testing; computer programming in the medical field; writing of computer data processing programs for medical applications; medical research; technical consultancy in the field of information technology for medical facilities and clinics; planning and design of medical facilities and clinics and elinics and elinics for optimum efficiency, accuracy and safety

IC 044. US 100 101. G & S: Medical services; hygienic and beauty care; medical diagnostic consulting services in the field of medical imaging regarding the use and operation of medical imaging apparatus including X-ray, computed tomography, magnetic resonance imaging, ultrasound, and positron emission tomography apparatus and consultancy in the field of diagnostic medical testing; nursing home services; medical clinic services; conducting physical medical examination services and medical testing for diagnostic or treatment purposes; medical imaging services; medical care; medical equipment rental; medical counseling; medical treatment, namely, mobile healthcare services, medical services, physician services, nursing care, nursing services; medical information services provided via the internet; telemedicine services; therapy services, namely, physical therapy, rehabilitative therapy, psychological therapy, speech therapy; leasing of medical technology installations, products and facilities, namely, leasing of medical clinics, medical research facilities, equipped medical facilities and mobile medical units; leasing and rental of medical apparatus and equipment; rental of medical technology products and installations; providing medical information in the nature of statistical data relating to medical research and related medical advisory services; providing medical information in the nature of compilation of medical examination reports and related medical advisory services

 Mark
 Drawing
 (3) DESIGN PLUS WORDS, LETTERS, AND/OR NUMBERS

 Code
 26.01.21 - Circles that are totally or partially shaded.

 Design
 26.01.21 - Circles that are totally or partially shaded.

 Search Code
 26.01.31 - Circles - five or more; Five or more circles

 Serial
 79213040

 Filing Date
 October 25, 2016

 66A
 66A

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10/25/2018

Current Basis										
Original Filing Basis	66A									
Published for Opposition	September 4, 2018									
International Registration Number	1357232									
Owner	(APPLICANT) Siemens Aktiengesellschaft AKTIENGESELLSCHAFT (AG) FED REP GERMANY Werner-von-Siemens-Str. 1 80333 München FED REP GERMANY									
Attorney of Record	Marie Anne Mastrovito									
Priority Date	May 4, 2016									
Prior Registrations	2392496;2508299;3867508;AND OTHERS									
Description of Mark	The color(s) petrol-blue (pantone:321 c) and orange (pantone:166 c) is/are claimed as a feature of the mark. The mark consists of the wording "SIEMENS HEALTHINEERS" with the word "HEALTHINEERS" in orange under the word "SIEMENS" in petrol blue. To the right of the wording is a design of nine shaded circles forming an overall diamond shape in orange.									
Type of Mark	TRADEMARK. SERVICE MARK									
Register	PRINCIPAL									
Live/Dead Indicator	LIVE									
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### Word Mark PHIL

Goods and Services PHILIPS

IC 003. US 001 004 006 050 051 052. G & S: Bleaching preparations for laundry use and other substances for laundry use, namely, laundry detergent; descaling preparations for household products; cleaning, polishing, scouring and abrasive preparations; non-medicated preparations, creams and lotions for the body, skin or hair; perfumery, essential oils, cosmetics and hair lotions; cosmetic body cream; cosmetic bath, shower, moisturizing and cleansing foams; cosmetic moisturizing oil; cosmetic body wash; cosmetic balms; cosmetic lotions; deodorants for human beings; liquid talc for toilet use; non-medicated massage creams, oils and gels; non-medicated talcum powder; non-medicated toilet preparations; perfumes; shampoos; shaving lotions; soaps; sun care lotion and after-sun lotion; dentifrices; toothpaste; cosmetic tooth whiteners; cosmetic bleaching preparations, hair bleaching preparations, and tooth whitening kits comprising tooth bleaching preparations, all for cosmetic purposes; non-medicated balm for baby bottoms; baby cremes, nonmedicated; shampoo for babies; nipple cream, non-medicated; disposable wipes impregnated with cleansing chemicals or compounds for toilet use; baby wipes for cosmetic use; cologne impregnated disposable wipes; facial wipes impregnated with cosmetics; moist wipes for toilet and cosmetic purposes; pre-moistened or impregnated cleansing pads, tissues or wipes for toilet use; aromatic oils and essences; non-medicated salts, lotions, oils, essences, creams and sprays, for promoting sleep

IC 005. US 006 018 044 046 051 052. G & S: Chemical disinfectants other than disinfectant soaps for household purposes; all-purpose disinfectants for household purposes; vitamin preparations and concentrates; vitamin and mineral supplements; sanitary preparations for medical purposes; dental prophy paste; dietetic food and substances adapted for medical or veterinary use, food for babies; dietary supplements for humans and animals; plasters for medical purposes, materials for dressings, namely, medical dressings, cosmetic dressings, wound dressings; material for stopping teeth, dental wax; all-purpose disinfectants; preparations for destroying vermin; fungicides, herbicides; antiseptic wipes impregnated with a pharmaceutical lotion, moist wipes impregnated with a pharmaceutical

lotion, sanitizing wipes, wipes for medical use; breast-nursing pads; inserts for breast shells; infants and babies' disposable napkins made of paper or cellulose; breast shells; sterilized wet wipes; baby diapers; tissues and wipes impregnated with pharmaceutical lotions and creams; milk powder for babies

IC 007. US 013 019 021 023 031 034 035. G & S: Appliances for household purposes not included in other classes, namely, electric food blenders, electric can openers, electric food processors, electric fruit presses, electric salt mills, electric pepper mills and electric mixers; electric knives; electric kitchen appliances for dicing and mincing food not included in other classes; electric dust removing apparatus for cleaning purposes, namely, vacuum cleaners; vacuum cleaner hoses, vacuum cleaner bags and other parts of vacuum cleaners in this class only; carpet cleaning machines; floor cleaning machines; steam cleaning machines; ironing machines and ironing presses; parts of the aforesaid goods

IC 008. US 023 028 044. G & S: Razors; electric and non-electric hair clippers and hair trimmers; scissors to trim hair; nail clippers; electric or non-electric depilation appliances, also serving as nose cleaners; electric or non-electric hair-removing tweezers; electric or non-electric nail files; electric or non-electric manicure and pedicure sets; hand tools, namely, punches for making holes in teats; hand tools, namely, tongs for picking up teats and other objects from a sterilizer; electric irons and steam irons; electric hair stylers; parts of the aforesaid goods

IC 009. US 021 023 026 036 038. G & S: Electric and electronic components, namely, diodes, resistors, capacitors, transistors, conduits, conductors and acoustic couplers, magnetic couplers, optical couplers, electric couplings; television apparatus, namely, television sets, antennas for televisions, television monitors; telephones, mobile phones; telephone answering machines; dictating machines; control apparatus in the nature of remote controls for controlling lighting systems and computer software programs for controlling lighting systems, not included in other classes; lightemitting diodes (LEDs), LED modules fully or partially consisting of integrated LEDs, OLEDs, polymer light-emitting diodes; optical control apparatus, namely, optical inspection apparatus for industrial use, thermal control apparatus, namely, digital thermostats; apparatus for recording, transmission or reproduction of sound or images; loudspeakers, loudspeaker horns; magnetic data carriers, namely, blank magnetic data carriers, recording discs, namely, blank recording discs; compact discs, namely, blank compact discs, DVDs, namely, blank DVDs; data processing equipment, computers; computer software for use in database management, use as a spreadsheet, word processing; computer mice, trackballs, touch pads and computer joysticks; remote controls for personal computers; electronic pointers, namely, light-emitting electronic pointers in the nature of luminous pointers, infrared pointers in the nature of slide presentation infrared pointer pens, and laser pointers, laser sensors for use in measuring motion; motion detectors, computer chips; semiconductors, integrated circuits; operating software for use with computer mice, trackballs, touch pads and computer joysticks, remote controls for personal computers, electronic pointers, namely, light-emitting electronic pointers in the nature of luminous pointers, infrared pointers in the nature of slide presentation infrared pointer pens, and laser pointers, laser sensors for use in measuring motion, motion detectors, computer chips, semiconductors and integrated circuits; alarms, namely, burglar alarms, fire alarms; scales for babies; computer monitors, thermometers not for medical purposes, and electronic thermometers not for medical purposes, including soother thermometers not for medical purposes; anti-radiation garment; downloadable electronic publications, provided online from databases or on the Internet, namely, magazines in the field of child care; blank electronic data storage media; pre-recorded magnetic data storage media, pre-recorded compact discs, pre-recorded cd-roms, pre-recorded records, pre-recorded tapes, pre-recorded discs, prerecorded cassettes, and pre-recorded cartridges, all in the field of mother and child care, and all containing sound, video, data, images, games, text, programs or information; blank interactive compact discs; blank CD-ROMs; blank record disks; blank video tapes; blank audio tapes; blank discs, namely, blank magnetic disks, blank record discs; blank audio cassettes; blank video cassettes; removable blank cartridges for hard disk drives; computer software programs for use in database management, spreadsheet processing, word processing, and software applications for mobile phones and other handheld mobile digital electronic devices for use in database management, spreadsheet processing, word processing; downloadable mobile applications for managing bank accounts, editing photos, making restaurant reservations, managing calendars; computer programs for accessing, browsing and searching online databases; computer software and firmware, namely, operating system programs, data synchronization programs, and application development computer software programs for personal and handheld computers; spectacle frames, eyeglasses, sunglasses; fridge magnets; baby monitors; digital video monitors; chargers for electric

batteries; battery chargers; batteries and electric rechargeable batteries; electrical rechargeable battery packs; central processing units for baby monitors; electric connections for lines to baby monitors; electrical power extension cords; electric charger stands for parent units of baby monitors; parts of baby monitors in this class only; bath and room thermometers not for medical purposes; digital photograph frames; electric stress meters not for medical use; x-ray apparatus not for medical purposes; parts of the aforesaid goods in this class only

IC 010. US 026 039 044. G & S: Surgical, medical, dental and veterinary instruments and apparatus; clothes for operating rooms, namely, surgical gowns; lights and lamps for medical, curative, surgical, and dental use, namely, surgical headlamps, surgical headlights, surgical lamps, surgical operating lamps; lights and lamps for veterinary use, namely, for surgical examination; artificial limbs, eyes and teeth; electric blankets for medical use; ultraviolet irradiation apparatus, devices and instruments for medical use, namely, ultraviolet lamps for medical purposes, ultraviolet radiator units for therapeutic purposes, UV lamps for medical applications; x-ray apparatus, tubes, installations and instruments for medical use; medical hearing instruments; feeding bottles; teats and soothers, namely, pacifiers for babies; chains and clips for holding pacifiers for babies; teething rings; spoons and medical feeders for administering medicines; incubators for medical purposes; breast pumps; nursing appliances for use in breast feeding, namely, breast shields and nipple protectors; thermometers for medical use; condoms; incubators for babies; commode chairs for babies and children; massage apparatus, electric or non-electric, body and breast massage apparatus; gloves for massage; vibration generating apparatus for massage for medical purposes; pregnancy support belts for medical purposes; babies bottles; disposable feeding bottles; disposable babies bottles; nipple shields for use in breastfeeding and in baby bottles; ice packs for medical purposes; breast milk storage bottles, pouches and other similar containers, that also can be frozen or heated; dummies for babies in the form of nipples; ear and forehead thermometers for medical use; medical apparatus for removing nasal mucous, namely, external nasal dilators, nasal aspirators, nasal irrigation vessels and naval lavage vessels; lasers for medical and cosmetic treatment of the face and the skin; skin rejuvenating apparatus, namely, portable laser systems, consisting of a handheld laser for use in cosmetic, medical and dermatological treatment of the face and the skin; dental instruments and tools for dental bleaching, or whitening, namely, dental curing lights, curing dental bite trays, intraoral dental lights, and polymerization apparatus for dental purposes; parts of the aforesaid goods

IC 011. US 013 021 023 031 034. G & S: Electric grills, electric toasters, electric bread-making machines, electric stone grills, electric sandwich makers, electric sandwich toasters, electric coffee makers, electric filtered coffee machines, electric kettles, electric food steamers, electric rice cookers, baking ovens, electric cooking ovens and microwave ovens; electric lamps; humidifying and dehumidifying installations, apparatus and instruments; apparatus and instruments for air conditioning; hot water tanks; installations in the nature of heat exchangers for liquefying gases; apparatus and instruments for sterilizing; heaters and warmers for feeding bottles, foodstuffs, liquids and solids; steam generating apparatus to generate steam for ironing purposes, for domestic use; air filters for domestic use, air purifiers and air humidifiers; hot water bottles; electric fryers and electric low-fat fryers; electric hair dryers; garment steamers; refrigeration coolers for breast milk; parts of the aforesaid goods

IC 014. US 002 027 028 050. G & S: Precious metals and their alloys; jewelry made of precious metals or coated therewith; statues and statuettes of precious metals or coated therewith; jewelry, including bracelets for babies and young children; precious stones; horological and other Chronometrie instruments; clocks; alarm clocks; watches; sleep trainer clocks, namely, clocks with alarms to awaken individuals to keep to training schedules; rough and processed industrial diamonds; parts of the aforesaid goods

IC 016. US 002 005 022 023 029 037 038 050. G & S: Paper; cardboard; printed matter, namely, newspapers, periodicals, books, catalogues, brochures, all in the field of mother and child care; folders, posters, diaries, newsletters in the field of mother and child care, printed publications, namely, magazines in the field of mother and child care; bookbinding material; photographs; stationery; writing material, namely, writing tablets; pencils; pens; materials for packaging of plastic, paper or cardboard, not included in other classes; adhesives materials for stationery and household purposes; artists' materials, namely, molds for modeling clays; paint brushes; typewriters and office requisites other than furniture, namely, punches; letter openers; printed instructional and teaching material in the field of mother and child care; printers' type; printing blocks; printing plates; disposable paper wipes for use on babies and infants; bibs and disposable bibs made of paper; table

napkins of paper; plastic bags for packaging ice bags for microwave cooking; plastic oven cooking bags; handkerchiefs of paper; cellulose wipes; banners of paper; paintings on silk

IC 018. US 001 002 003 022 041. G & S: Leather and imitations of leather; skins and hides; trunks and travelling bags; umbrellas, parasols and walking sticks; whips, harness and saddlery; baby slings and baby harnesses; ruck sacks, knapsacks, hand bags and other bags not included in other classes, namely, all-purpose carrying bags; baby changing bags; diaper bags; parts for all the aforesaid goods in this class only

IC 020. US 002 013 022 025 032 050. G & S: Furniture, mirrors, picture frames; locks and safety latches, not of metal; corner protectors of plastic for furniture; doorstop protectors, not of metal; safety gates for stairs and door openings; fireguards being furniture; bed rails, high chairs; cots and bassinets for babies and young children; pillows; baby changing mats; baby nest in the nature of padded carriers; support pillows for use in baby car safety seats and baby car safety seats; baby head support cushions; breast feeding pillows; parts for all the aforesaid goods in this class only

IC 021. US 002 013 023 029 030 033 040 050. G & S: Household utensils, namely, sieves, spatulas, strainers, turners, graters, skimmers, kitchen tongs; household containers; kitchen utensils, namely, splatter screens, pouring and straining spouts; kitchen containers; combs; scrub sponges, sponges for household purposes; brushes, namely, brushes for basting meat, cosmetic brushes, cleaning brushes for household use; toothbrushes, finger toothbrushes; household apparatus for cleaning teeth and gums using high pressure water; dental floss; apparatus for cleaning gums and between teeth, namely, electronic flossers which use water and air to clean between teeth; brush-making materials; electrically heated hair brushes; electric hair combs; electric rotating hair brushes for styling hair: beverage glassware; porcelain and earthenware figurines and statuettes, not included in other classes; cups and vessels adapted for feeding babies and children; household pouring spouts for cups, adapted for feeding babies and children; cups for food; containers for use in the sterilization of babies' feeding bottles and closures for such containers; milk powder dispensers; heat insulated containers for household use, including heat insulated containers for baby feeding bottles; baby food containers sold empty; non-spill covers or caps for use with cups; baths and potties for babies; bowls and buckets; drinking vessels; bread boxes, boxes for dispensing paper towels for household use; plastic bag holders for household use; thermal and isothermic household containers to keep bottles and cups warm or cool, including insulated containers; insulated and vacuum flasks and vacuum bottles; parts for the aforesaid goods in this class only

IC 024. US 042 050. G & S: Textile goods, not included in other classes, namely, towels of textile; bed covers; textile table covers not of paper; bed linen, textile goods for furnishing purposes, namely, pillow shams; fabric and cloth linens for pram and cot linen cots; woven synthetic textile wipes not impregnated with toilet preparations or cosmetics for use in sports; cloth napkins and table napkins made of textile; place mats not of paper; dish cloths; corduroy; felt and non-woven fabrics; bed clothes, namely, bed sheets; bed linen; unfitted loose covers for furniture; washing mitts, namely, bath mitts; cloth banners and textile banners

IC 025. US 022 039. G & S: Clothing, namely, shirts, pants, t-shirts; footwear; headgear, namely, caps, headwear; babies' bibs not of paper; scarves

IC 028. US 022 023 038 050. G & S: Games and playthings, namely, board games; gymnastic apparatus, and sporting articles, namely, spring boards, sports balls, carriers specially adapted for sport balls, all not included in other classes; decorations for Christmas trees; baby rattles; dolls

IC 035. US 100 101 102. G & S: Retail store services featuring laundry and cleaning preparations, pharmaceuticals, household appliances, hand-operated tools and implements, household electronic apparatus, surgical, medical, dental and veterinary instruments and apparatus, cooking apparatus, jewelry, publications and paper products, leather and imitation leather products, furniture, household and kitchen utensils, textiles and textile goods, clothing, games and playthings; advertising; business management; business administration; office functions

IC 036. US 100 101 102. G & S: Insurance brokerage; financial affairs, namely, financial information; monetary affairs, namely, acquisition and transfer of monetary claims; real estate affairs, namely, real estate agencies

IC 037. US 100 103 106. G & S: Building construction; repair and installation services of medical machines and apparatus and consumer electronics and household apparatus, namely, medical

	scanners, gamma ray imaging apparatus, respiration monitoring and flow measurement devices, defibrillators, patient monitors, televisions, audio sound systems and radios, computers and multimedia computers, electric razors and hair trimmers, coffee and tea makers, electric grills, electric woks, electric rice cookers, water heaters, water purifying apparatus, electric toothbrushes; installation services of medical apparatus and electrical consumer electronics and household apparatus, namely, medical scanners, gamma ray imaging apparatus, respiration monitoring and flow measurement devices, defibrillators, patient monitors, televisions; technical support services, namely, repairing and upgrading of computer system hardware, computer printers, and computer hardware and software for medical apparatus; providing maintenance and repair services to home owners buying, and dealers selling major appliances and consumer electronics products, namely, televisions, audio sound systems and radios, computers and multimedia computers, electric razors and hair trimmers, coffee and tea makers, electric grills, electric woks, electric rice cookers, water heaters, water purifying apparatus, electric toothbrushes; servicing of medical apparatus and diagnostic equipment
	IC 038. US 100 101 104. G & S: Telecommunications access services
	IC 041. US 100 101 107. G & S: Education, namely, providing tutorial sessions in the field of mother and child care, skin and facial care; providing of training in the field of mother and child care, skin and facial care; entertainment services in the nature of concerts, namely, live music concerts, arranging and conducting of concerts, concert booking; arranging and conducting of workshops in the field of mother and child care, skin and facial care; the aforesaid services also via Internet and mobile networks; organizing community sporting and cultural activities
	IC 042. US 100 101. G & S: Design and development of computer hardware and software; providing temporary and non-downloadable mobile software that enables users of computers and mobile devices to share, information and images, to form virtual communities, to engage in social networking and to monitor bables and infants
	IC 044. US 100 101. G & S: Medical services; veterinary services; providing breastfeeding information; provision of health and beauty treatments, namely, cosmetic face care services, cosmetic skin care services; teeth whitening services; hygienic and beauty care services for people; nursing home services; providing of respite care services in the nature of home nursing aid services; medical advice relating to the welfare of babies, infants, children and mothers; rental of medical equipment; all of the aforesaid services also delivered through internet and mobile services
	IC 045. US 100 101. G & S: Legal services
Mark Drawing Code	(3) DESIGN PLUS WORDS, LETTERS, AND/OR NUMBERS
Design Search Code	01.01.12 - Stars - multiple stars with four points 24.01.01 - Shields or crests (plain) with neither a figurative element nor an inscription contained therein or superimposed thereon 26.01.12 - Circles with bars, bands and lines
Serial Number	79162290
Filing Date	May 12, 2014
Current Basis	66A
Original Filing Basis	66A
Published for Opposition	June 28, 2016
Registration Number	5038342

International Registration 1240236 Number

September 13, 2016

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Registration Date										
Owner	(REGISTRANT) Koninklijke Philips N.V. a public limited liability company NETHERLANDS High Tech Campus 5 5656 AE Eindhoven NETHERLANDS									
Attorney of Record	EDWARD W. GOODMAN, KATHLEEN A. ASHER, EDWARD BLOCKER, MICHAEL E. MARION, DAVID SCHREIBER									
Priority Date	November 13, 2013									
Prior Registrations	0887175;0902994;0909496;AND OTHERS									
Description of Mark	Color is not claimed as a feature of the mark. The mark consists of a shaded shield with the term "PHILIPS" near the top. Below the term "PHILIPS" is a circle with two horizontal wavy lines in the middle and two four-pointed stars above the lines and to the left in the circle, and two four-pointed stars below and to the right in the circle.									
Type of Mark	TRADEMARK. SERVICE MARK									
Register	PRINCIPAL									
Live/Dead Indicator	LIVE									
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### EXHIBIT C

### ାରୁଜିଅନ କାତାପ୍ତାର୍କାର୍କରା ଭାରାଭାର ଯିନାଇଟୋଇଟୋଇଟୋଇଟା ଭାରାଭାର କୋର୍ଟାଭାର କାର୍କ୍ଟା

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### See What You Need to See

- Introducing the CFD CMOS Flat Detector—a more efficient panel that delivers better image quality at low dose.
- True continuous fluoroscopy allows you to view more detail—no stutter, visual lag, or ghosting
- Largest Field of View (FOV)\*---see 20% more anatom during your procedures

### **Ease and Efficiency**

- Easy C-arm positioning with improved maneuverabilit and light workstation\*\*
- Simplified user interface with fewer clicks, more active icons, measurement tool, and digital pen\*\*
- Efficient image capture with SmartView 180/180 pivot joint on OEC Elite CFD Ergo C-arm model

### **Intelligent Dose Control**

- OEC Elite CFD is the first premium mobile C-arm to deliver on the promise of Flat Detector technology achieving high IQ at a low dose
- Optimize dose and image quality by selecting from six options: Digital Spot, Digital Cine Pulse, High Level Fluoroscopy, Standard Fluoroscopy, Low Dose, Pulse

\*Compared to monoblock C-arms \*\*Compared to 9900 Availability of select models and configurations varies by country. Please contact your local sale

representative.

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### **Clinical Images**



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### Videos



OEC Elite CFD Ergo C Overview



**OEC Elite CFD with Motorized Drive** 

### Features



OEC Elite CFD performance in a variety of clinical applications to meet your specific needs. ORTHOPEDIC • SPINE • GENERAL SURGERY • UROLOGY • PAIN MANAGEMENT • VASCULAR • CARDIAC

Experience the future of mobile surgical imaging today with an OEC Elite CFD premium CNarrowith CMOS flat panel technology,



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see what you've been missing and experience image quality at low dome OEC Elite CFD also brings enhanced user experience for smooth surgical workflow.

\*Based on other OEC models

### **C-arm Models**

### Ergo C

- Reach with 55° of overscan and 97° underscan
- Agile C-arm with 26.5" arc depth
- Efficient positioning with 180°/180° flip flop
- Set and go with color-coded gradual locks
- Accommodating low lateral height
- Less adjustments with small AP/Lateral offset



### Super C

- Reach with 55° of overscan and 90° underscan
- Greater working space with 33" arc depth
- True lateral views with ease
- Easy rollover views
- Motorized option with remote user interface

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### Accessories

Protect your staff, patients, and OEC equipment investments with custom fit C-arm drapes and other disposables and accessories.







### Education

Take advantage of training from dedicated OEC C-arm clinical imaging specialists who train over 14,000 clinicians and technologists annually. A CE-credit education series is available for purchase through the OEC University program.

Call 1-800-874-7378 to schedule.



### **Service and Training**

OEC C-arm Uptime You Can Count On

Whether you're looking for a full-service contract or on-demand



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OEC C-arm repairs, it makes good business sense to partner with us to keep your equipment up and running.

Learn how GE Healthcare's OEC C-arm Service offerings are redefining peace-of-mind.





### Related



### OEC One

The OEC One is an all-in-one C-arm that delivers the superb image quality you expect from OEC, with a Clear View of images you need – where, when, and how you need them. With the smallest footprint in its class and ergonomic handles at the mainframe and along the full C-arm, the OEC One system also clears up space and provides easy maneuverability for your surgical space needs.



### **Uroview FD**

Enjoy advanced ergonomics for easy patient access and a comfortable working environment for you and your team.

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### **OEC Elite M**

The OEC Elite Mi arm experience.

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### OEC<sup>®</sup> Service Redefining peace-of-mind.



# Uptime is the bottom line.

You work hard everyday to deliver excellent patient care, minimize costs, and maximize revenue. A down or impaired C-arm can jeopardize the health of your business and your patients.

Uptime. It matters to you, your patients, and your doctors -- it's important to your financial success.

Your C-arm needs the best service program to maximize uptime year after year. OEC service is a unique combination of experts that work together to provide a comprehensive service solution. Our service team includes specially trained Field Service Engineers, Clinical Imaging Specialists, and Technical Support Engineers with extensive field experience, and a quality assurance team that closely monitors service trends to ensure continuous improvement. It makes good business sense to partner with us to keep your equipment up and running . . . that's uptime you can count on.



"When our machine is down we don't make money and we lose doctors. GE's level of service far surpasses other providers. It's about peace-of-mind and the best possible service."

Mike Materials Manager Texas



### This is OEC Service.

- 100% specialized in surgery
- 15 average years experience per engineer
- Parts that are factory-qualified, tested, and up-to-date
- 100% service reports monitored and evaluated
- 60+ annual hours certified, factory training per engineer
- 30 minute call back
- 6 hour on-site response.

At OEC Service, our goal is to respond quickly, fix your equipment right the first time, and keep your machine running. We are continually investing in people, training, and processes to deliver superb service for you.

# Experience.



"I'm an imaging specialist in clinical engineering, and I'd recommend GE service to anyone. It for exceeds other service."

Bill Imaging Specialist California

"My service engineer has 25 years experience and knows all the error codes by memory. He's seen everything before and can help me fix it right away."

Kenneth Biomed Engineer Tech Specialist Maryland



# Differences

### 60+ hours of certified, factory training annually helps us fix your equipment right the first time.

OEC service engineers receive intense, proprietary instruction as well as continuous factory updates and quality tips. This means our engineers have the training and diagnostic tools to keep your OEC C-arm appropriately maintained and calibrated for long-term performance.

Service engineers are key participants in GE's quality improvement. They help identify vulnerabilities, investigate the root cause, determine a compliant solution, and implement the long-term fix. Their involvement in the quality process continually builds their product knowledge and expertise.

94% of OEC customers rate their service engineer excellent for communication. Specialized in surgical equipment means we fix issues fast. Day-after-day, working only on surgical products builds up a unique level of expertise. Our service engineers know the product inside and out which helps them diagnose and fix your machine quickly. In fact, our entire service team, customer service center, technical and clinical support experts are all specialized in surgery, delivering focused service.

### 15 years average experience helps in accurate diagnosis and repair.

Our service engineering team has great depth—over 15 years of industry experience on average. That experience translates to hands-on knowledge that helps in accurate diagnosis and repair.

9-out-of-10 of customers highly recommend OEC Service to colleagues.



### 100% of service records monitored and evaluated help us deliver real-time solutions.

Our quality is top-notch and never stops improving. OEC tracks, evaluates, and trends 100% of our service records. This means we're getting daily, real-time information on our systems to help our engineers give you the best solutions to help keep your equipment up and running longer.

### 30-minute call back and 6-hour on-site response means we get there quickly.

Downtime means lost revenue and higher costs, so you need your service team to respond in minutes. We call you back within 30 minutes and, when needed, arrive on-site within six hours.

97% of customers say OEC's response time exceeds expectations. Parts that are factory-qualified, tested, and up-todate help us maximize your system's performance. Know what you're getting. Maximize your system's performance with OEC certified parts that have been thoroughly tested and validated. OEC parts installed and calibrated by our engineers help minimize DOA's and other problems caused by questionable parts. The quality of our parts can help maximize repair effectiveness and system performance.

100% of our service reports are analyzed and resolved by our team of quality assurance specialists, ensuring continuous quality improvements. When your OEC C-arm is not maintained, a single unexpected repair with associated downtime, physician dissatisfaction, lost revenue, and diminished quality of patient care could cost \$10,000, \$25,000, even \$30,000 or more in parts, labor, and downtime. Do you have a budget for that?

### Why risk it?

With an OEC Service contract you can budget for and cap all repair costs for the year, prevent surprises, and direct resources to other important places. Trusting in a team of experts can help you minimize risk and maximize the potential of your OEC investments. A smart decision.





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Healthcare Re-imagined

GE is dedicated to helping you transform healthcare delivery by driving critical breakthroughs in biology and technology. Our expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, and biopharmaceutical manufacturing technologies is enabling healthcare professionals around the world discover new ways to predict, diagnose and treat disease earlier. We call this model of care "Early Health." The goal: to help clinicians detect disease earlier, access more information and intervene earlier with more targeted treatments, so they can help their patients live their lives to the fullest. Re-think, Re-discover, Re-invent, Re-imagine.

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imagination at work

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# The team behind the future of AI in healthcare

A new 10-year commitment aims to integrate Al into every aspect of the patient journey



Rarely are there such juxtaposed views around the potential of a technology than those surrounding Al in medicine. As skeptics ask for proof, supporters sell the dream. Both know that it's mostly unchartered territory ahead.

That's why one hospital system is pinpointing what's been holding AI back and developing the business model, platform and tools to ensure clinicians and patients can benefit from its potential.

"Instead of building AI solutions in isolation, we should think about the technology the way we are growing to think about patient care – as a continuum, spanning care areas and disease states," said Mark Michalski, MD, Executive Director of the Massachusetts General Hospital and Brigham and Women's Hospital Center for Clinical Data Science.

But to take on AI in this capacity, Dr. Michalski and his team knew that they could not do it alone. Partners HealthCare, an integrated health system founded by BWH and MGH, sought the partnership of healthcare technology and solutions provider GE Healthcare, and today, the two entities announced a 10-year collaboration to make this theory a reality



Reflecting on an imaging milestone with a look into its Al future

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We asked top clinicians what they really think about the future of Al in healthcare. Here's what they said

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The team behind the future of AI in healthcare - GE Healthcare The Pulse

We should think about AI the way we think about patient care - as a continuum, spanning care areas and disease states. "

Dr. Mark Michalski Executive Director of the MGH and BWH Center for Clinical Data Science

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Their strategy is to approach AI holistically – build not just one tool but an open platform; develop not just one application but an entire library; integrate the technology not just into one hospital or health system but into every imaging machine and the GE Health Cloud, which can be leveraged around the world.

Dr. Michalski explains what the result might look like. A patient enters the emergency room after a car accident. He has a spinal injury and has experienced back issues before. To avoid significant or permanent damage, a clinician must rapidly sort through 300 images generated by an CT, two prior spine scans, and clinical notes in the patient's electronic medical record before making a diagnosis. It's a race against the clock that could be supported by Al. Among the deep learning applications to be developed is one that sorts through the worklist, analyzes the flood of data, and identifies the most critical images for the radiologist to read. For the spinal injury patient, this could mean a more timely, accurate diagnosis. For the clinician, this could mean valuable minutes returned to their day.

Another scenario in which deep learning applications could help, Dr. Michalski explains, is for a patient undergoing cancer treatment. Knowing whether the treatment is working, and pivoting course accordingly, is critical to the patient experience and treatment success. Currently, there is great variability in the way tumors are tracked after therapy. Part of this is due to natural human variability; part of it is because hospitals may differ in their approach. By using a deep learning application that automates and standardizes measurement, clinicians can feel more confident in determining whether a patient's reaction is positive or negative and better understand the signals or features that indicate such response.

Worklist prioritization, faster intervention and predictive prognosis are not the end of this Al collaboration. These targeted outcomes are just the beginning. By co-developing solutions that span medical specialties, starting with radiology and ultimately including pathology, genomics and population health, as well as clinical care areas, including cardiology, oncology and emergency medicine, the team ends the industry's previous one-off or narrow approach.

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"We're creating the infrastructure for AI in medicine and the tools to improve patient care around the world."

Todd McNitt GM of Healthcare Digital Solutions, GE Healthcare

(%)

"We are building the technology based on not just data availability but clinicians' greatest pain points and patients' greatest needs," said Todd McNitt, General Manager of Healthcare Digital Solutions for GE Healthcare. "On top of that, we are creating the infrastructure and business models to seamlessly integrate the tools into clinician workflows and patient care."

The open platform to be developed will enable rapid prototyping and validation of the solutions. It will also benefit from third-party development and support. To ensure patients and clinicians globally can access the technology and growing knowledge base built into the tools, the applications will be integrated into smart imaging devices and deployed on the GE Health Cloud.

Note: Technology in development that represents ongoing research and development efforts. These technologies are not products and may never become products. Not for sale. Not cleared or approved by the U.S. FDA or any other global regulator for commercial availability

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At Philips HealthSuite Labs, we welcome you and your stakeholders to accelerate decision-making and innovation with our Dergen Timiking and agile approach. Together, we co-create and co-innovate solutions by leveraging your and our combined climical, research, design, and digital expanse.

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Collaborations with the Outen Regional Calle Network Midden-Brabant in devolop a new regional model for connected health for people living with diabetes

A different approach to bealthcave innovation is necessary. Complex challenges require all relevant stakeholders to co-create new sustimable healthcave models and suvertigate marangful use of gatal technologies to open new avenues for patient self-management, care flaw improvement and cost reductions.

Modern day unrovation labs no longer have scientists working in splenchd isolation – these labs are close to the customer, digital and involve multi-disciplinary expertise and creativity.

Philips facilitates this co-creation process, using our digital, clinical and research experts in an immersive environment

Our guided multi-stakeholder Design Trinking approach enables the fusion of next generation technologies, clinical and fectinical experts, and new business models

This imposed fusion brings the right erowstein partnerships to help you accessfully accelerate and deploy new models. Enabling iteration speed in developing and testing new proof of correpts.

Contact us today to discuss your current rhallenges and explore if HealthSuite Labs is right for you.

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On the co-creation process in HealthSuite

We facilitate co-creation by connecting key stakeholders to redefine care pathways

Improving national care through partnering and meaningful innovation 

> Defining an eilealth-driven patient-centric care pathway for diabetes with Care Network Midden-Brabant (ZMBR) in the Netherlands

The healthcare challenge: how to upbace digital platforms to stimulate the collaboration among caregivers to optimize healthcare for patients with diabetes type I or type 2 by looking into information exchange, the stakeholder landscape, and platform driven services and solutions

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Addressing the vision of a platform driven patient-centric care pathway for disbetes patients in the south of the Hernerlands. For this oxion, HealthSuite Laos brought together patients, Caregiver, care networks healthSare professionals from several organizations and Pathos Research and Design equations into one como to explore, behaviorm and design equations into (tigetal) platform from the patient-centric care patients) from several organizations and approxil we by pathos from the south of Reforma 7007, a platform to consisting of an app and we by pathos the other south and caregivers. The solution, consisting of an app and begins the other to pathos and the patients and caregivers is husbed on Philips HealthSure Digital Platform (HSDP).



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Defining how to adopt and utilize digital health solutions to improve healthcare results with an University Medical Center – Germany

The healthcare challenge: how to improve healthcare results by adopting and utilizing oigital health innovations like healthcare IT platforms and integrated care solutions?

Addressing the desire to accelerate the adoption of digital innovation that leads to better results in healthcare

For this desire, HealthSuite Labs brought together Matthcare professionate and Philips Research and Design experts to explore, brainstein and deep dive hito solution directions for a deviced future medical center with integrated IF and care solutions, Resulting in a strategic digital likelib pathersinp to deliver networked cardiac care across integrine region of Germany.

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### Improving immunization and primary health data systems with Gavi - Ugenda

The healthcare challenge: how to collect, report and analyze accurate immunization and primary health data sensitive to the needs of a country's healthcare system?

Addressing the need and vision of building the national primary healthcare system of the haure two upin data driven programs. With wat jak ments being understanding program effectiveness, monitoring development of diseases and allocating needed resources Especially in the area of minimumation, the Ugandard Ministry of Health focuses on increased coverage all across the country and introducing new vacanes.

For this need and vision, Healthi Suite Laos brought together the Upandan Nihistry of Health. bockl Healthcare professionals, bon-Governmental Organizations and expension from Thiogo Research, Deega and Healthcare. In tendomizano Sennes, The HealthSuite Labs outcome constact of a sinked vision for the digitezation of fimuurination service delivery. Key datarelated onlateges is the current succemban data. Possible solutions for samformative innovabors: And a draft digital transformation roadmas.











HealthSuite Labs ecosystem

HealthSuite Labs offers a systematic approach to solve complex healthcare challenges, making effective use of valuable time and resources.

HealthSuite Labs offers our customers direct access to our clinical, research and digital experts for collaborative problem solving.

### HealthSuite Labs uses:

- Clinical expertise
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Cocreate is Philips' creative, iterative, and multi-disciplinary design thinking methodology that helps to address complex multi-stakeholder challenges In healthcare.

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- Organizations exploring new collaborative, networked care models and looking to unlock the value of healthcare data
- Potential partners willing to commit to cocreating solutions to accelerate innovation







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# PHILIPS

Patient Care and Monitoring Solutions

# Right from the **start**

Philips Value Added Services for patient monitoring

# Confidence from day 1

You've chosen your patient monitoring solution. Now take the next step to success with quality guidance to plan, install, and implement your complete medical monitoring system.

Because we do more than 7,000 installations each year, we can help you identify challenges you're likely to face, preventing unnecessary costs and delays.

### Leverage our know-how to improve your installation

Our goal is to help you have a seamless and effective monitoring experience, from installation to ongoing use. The Philips Value Added Services consultation team can help you think through the patient monitoring system design, use models, and installation process to help you meet your clinical, biomedical, and IT needs, while delivering to a tight project schedule with costs that are known up front.

Your Philips Value Added Services team will work to: - Identify the costs associated with installation and planning, as well as additional services that can help make your patient monitoring more effective

- Examine crucial issues and work with you to identify a comprehensive solution to meet your needs, many elements of which can be performed by your own organization
- Evaluate different IT systems and clinical use models
   to help your organization run more efficiently

### The Philips difference

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Not only do we identify our costs up front, we see to it that all parts of your system can work together over time. We understand that a smooth and timely installation means a better experience for you, can lead to better care for your patients, and, ideally, results in a long-term relationship between your organization and ours.

# Value Added Services offerings

Here are the core set of services and products that can be included in your patient monitoring solution. Some of these services are essential to your monitoring installation and are performed by Philips. You'll find that other services can be performed by Philips, third parties, or your own organization. We'd like to help you better understand the value of each so that you can compare and select the best alternatives.

### Installation services

Services necessary to complete most installations include device upgrades and cabling infrastructure. A Philips factory-trained, experienced professional service engineer will perform the field-tested installation upgrade to provide new enhancements and additional functionality not available with previous monitors.

Valı diff	ue erentiator	Philips deliverable	Value proposition
Devi serv	ices	A Philips service engineer will perform the field-tested installation upgrade on the following products: • IntelliVue patient monitors and information systems • IntelliVue MX40 telemetry monitors • IntelliVue Guardian Solution software • IntelliVue Guardian Solution software • IntelliSpace Event Management (IEM) software • SureSigns Vital Signs monitors and systems • Avaion fetal monitors and systems • HeartStart defibrillators A Philips Clinical Specialist will provide go-live support to your clinical staff.	<ul> <li>Extends the life of your existing monitors</li> <li>Offers a cost-effective and time-efficient approach to software and hardware upgrades</li> <li>Services are performed right the first time and backed by qualified Philips technical resources</li> <li>Over 200 US-based field service and network engineers in addition to the Customer Care Solutions Center for prompt, nearby service</li> </ul>
Cabl	ling Istructure	Philips provides high-quality, complete cable services including: • Cat 5/6 cable pulling • Cat 5/6 patch panel • Cable termination • Fiber pulling (6- and 12-strand) • Fiber patch panel • Point-to-point testing • TIA/EIA testing and certification • Dust containment (HEPA filtering) • Cable project management services • Labeling	<ul> <li>Provides infrastructure reliability</li> <li>Minimal disruption to staff and facility for cable pulling installation</li> <li>Coordinates vendor activity to free up customer resources</li> <li>HEPA filtering during installation helps to protect the work environment and patient care areas</li> <li>Services are performed right the first time and backed by qualified Philips resources</li> <li>Full turnkey solution is not offered by many other monitoring OEMs; Philips provides a one-stop shop</li> <li>Labeling of the patch cable defines the device it supports for easy identification</li> </ul>
			Cable run in

Cable run in erver room



## Professional services

Value

Philips IT-related services include project management and implementation, integration and interoperability, telemetry implementation, and network design and consultation.

Philips deliverable

### Value proposition

	differentiator		
57	Integration and Interoperability services	<ul> <li>Philips industry- and factory-trained integration and field service engineers will;</li> <li>Configure HL7 vital sign data for export to electronic healthcare record system (EHR) and the hospital information system (HIS)</li> <li>Configure the interfaces of external medical devices with R5232 or LAN interface to Philips IntelliVue patient monitors via IntelliBridge</li> <li>Provide installation, configuration, and test services for registration information to the PIIC/PIIC iX and IntelliVue bedside</li> <li>H17, ADT, Wave Strip Export, Document Export, R5232 Out, and Workflow for SureSigns/Guardian, IntelliBridge Systems Services also available</li> </ul>	<ul> <li>Easy troubleshooting of connectivity issues</li> <li>Easy for hospital IT to transfer Philips data into their system</li> <li>A one-stop shop can reduce clinician workload</li> <li>Personnel who understand the customer environment and in:lustry standards, resulting in on-time performance and compliance with industry regulations and standards</li> <li>Over 200 US-based integration and field service engineers</li> </ul>
	Project management and implementation services	<ul> <li>Philips will assign a project manager to interface with your organization and manage all Philips aspects of the project for timely completion. These services include:</li> <li>Project kick-off meeting with key stakeholders</li> <li>Management of installation services</li> <li>Discussion with construction and other cable vendors</li> <li>Post-implementation walkthrough</li> <li>Project acceptance</li> <li>As-built documentation</li> <li>Additional project management services are available and scalable ranging from basic to advanced project management services:</li> <li>Project schedule/Gantt chart</li> <li>Work breakdown structure (WBS)</li> <li>Risk management</li> <li>Communication management</li> <li>Project workbook</li> <li>Vendor management</li> </ul>	<ul> <li>Provides one point of contact for hospital staff</li> <li>Frees up valuable hospital resources</li> <li>Offers smooth, timely, and on-budget installation planning</li> <li>Project planning management conforms to PMI standards</li> </ul> <b>With Standards Intellivue bedside cisplay vilth</b> VHM support am.

	Value differentiator	Philips deliverable	Value proposition
	Telemetry implementation services	Customizes the telemetry design to your specific facility by taking precise measurements to understand the RF environment of our 1.4 Smart Hopping network (the RF environment is different with each facility and may be impacted based on facility structure as well as other equipment operating within the same frequency band). Available services include: • Access point surveys • Hot spot surveys • Short range radio (SRR) surveys • RF design • Access point enclosures • Telemetry transmitter storage • Wireless medical telemetry service (WMTS) registration and surveys	<ul> <li>RF surveys provide documentation of system performance and deliver a solid baseline in signal interference issues arising from changes in wireless environment or outside influences</li> <li>RF surveys provide recommendations for optimization of access point, hot spot, and/or Short Range Radio locations to reduce patient signal dropouts, inoperative alarms, and nursing visits to the bedside due to potential signal errors</li> <li>Access point enclosures help prevent theft since doors are lockable, are HIPAA compliant, and allow biomedical personnel to access without needing HEPA tents</li> <li>WMTS registration service so that your system is in compliance with FCC regulations and that the certificate is delivered in a timely fashion</li> <li>Gives customers the confidence in design and operational integrity due to the highly qualified factory- and industry- trained wireless engineers who perform these services</li> </ul>
R.A	Network design and consultation services	<ul> <li>Philips offers multiple options designed to meet networking strategies of hospital organizations and life-critical network requirements.</li> <li>Customer-supplied clinical network (CSCN): consultation on the design and operational requirements by factory- and industry-trained network engineers where the hospital manages the complete implementation</li> <li>Some of the CSCN consultation services performed by the network, integration, and field service engineers include 802.11 surveys, DNS services, DHTP services, and virtualization consultations</li> <li>Philips-supplied choicat network (PSCN): professional design and instaltation whereby Philips manages the complete implementation</li> </ul>	<ul> <li>For CSCN -</li> <li>Deploying Philips patient monitors on a hospital's network gives greater control and visibility of Philips networked devices to the IT department</li> <li>Utilization of customer-provided infrastructure to maximize investment</li> <li>Hospital can develop its own risk management strategy such as IEC 800001-1:2010</li> <li>For PSCN -</li> <li>Hospital labor and management not required, atlowing staff to carry on its day-to-day business with limited interruption</li> <li>Provides continuous operation with minimal delay and downtime on a reliable OEM-provided secure private network</li> <li>Philips provides customers choices to employ either PSCN or CSCN</li> </ul>



Remote displays in cockpit with KVM, audio, and mounts.

# Clinical enhancements

Philips can provide services that improve the clinical and technical use of your monitoring systems.

Value differentiator	Philips deliverable	Value proposition
System hardware	<ul> <li>Philips will:</li> <li>Procure, install and configure server and client hardware including mouse, keyboards, and printers</li> <li>Mount and install patient monitoring devices associated with the system</li> <li>Provide operating system software, SQL server, and anti-virus applications</li> </ul>	<ul> <li>Installation is tailored to comply with customer's departmental standards to be certain the solution is complete and fully operational</li> <li>Hardware includes a vendor three-year, 24x7. four-hour response warranty</li> <li>Frees up customer IT resources as Phillps assumes the bulk of the workload</li> </ul>
Displays	<ul> <li>Single- or multiple-monitor display solutions, including remote displays designed to meet recommended size and diagnostic resolution requirements for central station locations</li> <li>A range of display sizes are available upon request.</li> </ul>	MaxImizes functionality and maintains consistency throughout your facility     Monitors are compatible with factory specifications
Remote solutions	Remote solutions designed to provide displays in convenient locations such as waiting rooms, hallway alcoves, and the staff lounge. Solutions include. • KVM and multi-audio/video • PIICs remote KVM • Input devices (mouse, keyboard, etc.) • Interactive and non-interactive displays with and without audio • Remote CPU	<ul> <li>Allows staff to obtain patient data remotely to provide prompt patient care untethered to the rentral station</li> <li>Provides a well-organized area and better use of limited nursing space</li> <li>KVM allows for a secure location of critical monitoring hardware in a controlled environment, which can help extend the life of the equipment</li> <li>Provides HIPAA security and improved clinical workflow</li> </ul>





Cardiology review station with remote displays.

# Clinical enhancements

Value differentiator	Philips deliverable	Value proposition
Equipment closet solutions and components	Philips provides standard network hardware for mounting network components in communication closets. Components include: • Two- and four-post open-faced racks • Enclosed racks • Cabinet wall mount solutions • Rack consoles • Cable management trays • Rack ladders and power strips • UPSs	<ul> <li>Solutions provide a clean, streamlined work environment by reducing the footprint of devices</li> <li>Provides a one-stop service location for your clinical engineering team, freeing up valuable resources</li> </ul>
Medical device mounting solutions and consultation	<ul> <li>Bedside and central station monitor mounting solutions are tailored to optimize workflow in each department of the healthcare environment.</li> <li>These mounting solutions include:</li> <li>Two sizes of variable-height mounts with optional extension and suspension</li> <li>Interface to architectural products such as headwalls and pendants</li> <li>Multiple lengths of standard fixed height arms, with tilt/swivel/pivot</li> <li>Roll stands with handle, cable management, and storage</li> <li>Patient cable management hardware</li> <li>Walt, countertop, or celling display mounts</li> <li>Felai monitor carts with Integrated charting workstation configurations</li> <li>Under-the-counter CPU mount and sling</li> <li>Charging station and power supply mounts with covers for clean workstations</li> <li>Anesthesla mounting solutions</li> <li>AFC ERGO desks</li> <li>War room design consultation</li> </ul>	<ul> <li>Variable-height mounts provide a range of heights and articulation for Philips monitors, resulting in a more ergonomic and flexible solution</li> <li>Mounts are medical-grade quality and designed to last longer than many alternative options, reducing cost of ownership</li> <li>Solutions for central monitoring units and central monitor mounts are designed to meet your site-specific configuration as well as provide the ability for growth</li> <li>Mounting solutions are factory-validated and approved</li> <li>Cable management allows for fast application of leads and quick patient assessment and treatment, facilitates improved compliance with Joint Commission patient safety guidelines! by reducing infection and safety risks associated with disordorly cords and alleviates entanglement problems with individually stored cords</li> </ul>

IntelliVue monitor mounts with cable holders in OB department.

<sup>1</sup> Joint Commission National Patient Safety Goal 07 03 01 and Joint Commission infection Control Standard IC 02:02:01



# **Education services**

Valuable education services are enhancements to most implementations, and include clinical education and consultation services and biomedical education tailored to your needs.

Value differentiator	Philips deliverable	Value proposition
Biomedical education	Philips provides hands-on education to your biomedical staff delivered by CompTIA-certified technical trainers, allowing your staff to support your Philips solutions. Some examples of factory-training courses include: • MX40 Telemetry and Wireless Monitors • Telemetry 1.4/2.4 Gbz • PIIC IX Basic Service Training	<ul> <li>Training extends beyond the individual monitor to network components and basic understanding of network infrastructure</li> <li>Most biomedical service courses provide identical training for customers as with Philips field service engineers</li> <li>A trained staff may result in reduced service costs and decreased time to resolution</li> <li>All courses are avaitable at our state-of-the-art training facility in Cleveland, OH</li> <li>Many courses are also delivered locally</li> </ul>
Clinical education and consultation service	<ul> <li>Philips offers educational services, including:</li> <li>Clinical use-model assessment, consultation, configuration services, essential end-user education, advanced concepts education on-site go-live support, and on-site follow-up</li> <li>Clinical assessment helps delemine appropriate course objectives</li> <li>On-site assential education and/or go-live support by a clinical specialist during the time frame associated with initial equipment installation</li> <li>On-site support for customers at initial use of new systems with on-site demonstration along with written materials (including instructions for use and skills checklists) and computer-based training (CBT)</li> <li>Clinical Performance Agreements (CPAs) for 24- or 30-month terms providing a highly flexible, customized program ranging fram education and online learning</li> </ul>	<ul> <li>A local account clinical specialist works in close collaboration with the education department to design an education strategy to meet the needs of the staff and help to enhance clinician productivity</li> <li>CET allows the clinician to go online and conveniently access our virtual classroom to obtain self-paced product education</li> <li>The virtual classroom also allows customers to manage students, track learner progress and completion</li> <li>Philips provides contract hours for nurses who successfully review the CBT and score appropriately on the given exam</li> <li>CPAs provides convenient delivery times, allowing our program of services to fit your busy schedule</li> <li>Philips has 90 clinical specialists across the US and 99% of them are RNs with at least 15 yours' of nursing experience</li> </ul>

Bringing Value Added Services to the hospital server room







With an eye towards managing system costs and improving outcomes, advanced design continues to onhance safety. quality, and dura beliny of products. We already see significant progress in this space, with our minimally invasive tools that help surgeons with early detection and more targeted treatment of conditions like lung cancer and Barrett's stophagus, aleading predictor of risophageat circle.

Innovation in the surgical space continues, and in the future we believe more surgivity deprocessions will be accessed by source is available of the source of the technologies. Bits search by Commonge Hotflag. Reputies suggests readies by 2025/ As more procedures thereas its prevent scales by 2025/ As more procedures theorems tabilitated by this find of technology, we cogare posterial access the care conclusion for patients.



Robotic surgery will grow 5 times

----and intend to be a leader h: advancing computer-assisted minimally invasive procedures well into the future.

### REAL WORLD APPLICATION HELPS EXPAND INNOVATION

"Our growing, global network of innovation centers provides critical insight to the nuances that exist in healthcare delivery from one region to another. "

And at our Applied innovation Lub in Ninorsota, a 560 degree "holodeck" provides an immersive experience to help scientists und engineers understand the necks of neel/trake provides in remote regions and identify root cases of barriers to care. Such echnology prayed a bey role during a 2016 pilot prodorm Nichana and Kenya that has since isot to the ceration of Hedstonic Labis Empower Health." a novellypertension management model intended to roca use the outge and improve the reflictionsy of managing Pypertension for both patients and clinicians in energing geographies.\*

### DATA AND EXPERTISE UNCOVER POTENTIAL

The massive amount of data collected by Loday's wearable and implement medical devices provides insight to the nealth-are realities of the future. Announced indice 2017, a new partnership between Neutronic and Marcy Health established a data visualing and a mays is network that with high corord of the fast evence — using anonymous patient data from implementable devices — to further medical device innovation and patient access to care.<sup>11</sup>

### INNOVATION HAPPENS BEST WHEN IT HAPPENS FAST

Backed by teams of experts spenning disciplines and dultures. Nextronic creates to runs into the ded to accelerate BSD. The company's Knowledge Center team has built a communications infrastructure for technical experts across the organization, including internal scientific, conterences, sympusiums, and an online collaboration platform.



104 days

speed

### A PROMISING FUTURE OF BETTER HEALTH

We envision a day in the near future when capabilities Bie 3D printing oill allow physicians to order customized devices manufacture/for specific patients; and training on the latest sourclaft procedores with anyor moting augmented cells (), tonger term, with the help of bur patients, we anticipate a day when thronic disease non-operating to come of diorities for patients; concert reastment is moting more it man adv procedure, and debit adult in heart and brain conditions are not only nor e treatable, but entirely preventable.

For the millions of patients we serve, the future starts today. We invite you to share in the possibilities, and help us take healthcare further. Together.

LEARN MORE

Read the Mediconic Perspective on Meaningful Innovation: Meaningful Innovation: The Spirit That Drives Us (PDF)

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# MEANINGFUL INNOVATION THE SPIRIT THAT DRIVES US



With costs on the rise, and a focus on delivering better outcomes, a new era of healthcare is upon us. Powered by an unwavering Mission to improve lives, Medtronic teams are uncovering the potential that today's technology offers, both near and long term. Together — with partners spanning disease states, industries, and geographies — we combine a patient-centric mindset with the expertise and application needed to make a difference for patients, providers, and health systems around the globe.

### RON BROWN WRITES A LETTER TO MEDTRONIC EVERY YEAR

The husband, father, and grandfather has lived with the help of Medtronic technology since his 30s, when he received his first cardiac pacemaker. His annual letter is read to employees around the holidays, and is a subtle reminder of why we do what we do. "Without your products," he tells the crowd, "I would be a fading photograph in a family album."

"Without your products, I would be a fading photograph in a family album."

Co-founder, Earl Bakken, etched the concept of **meaningful** innovation into everything at Medtronic. His passion to "put things together, differently" inspired Bakken to develop the first wearable, external, battery-powered, transistorized pacemaker in 1957. That passion — combined with a Mission to improve the lives of patients — remains strong at Medtronic seven decades later.

Today, our therapies help two people every second.<sup>1</sup> With 84,000 employees working across 160 countries, developing patient-focused innovation — and strong partnerships — remain key to an even better, more impactful future.

"The only way to step into the future is to see further than what we can measure, beyond what we see, and understand what could be a possibility," says Medtronic Vice President of Corporate Science, Technology, and Clinical Affairs, Michael Hill. "As Earl Bakken told us, 'Look beyond the apparent; nothing is impossible.""

### PATIENT-INSPIRED TECHNOLOGY FUELS 21ST CENTURY HEALTHCARE

The number of people who use connected devices to monitor their health is forecasted to grow sevenfold by 2021, from 7.1 million in 2016 to more than 50 million.<sup>2</sup> With the advent of remote monitoring, wearables and telemedicine, and 30 percent of today's healthcare spend attributed to administrative costs<sup>3</sup>,

50M: Individuals expected to use connected devices to monitor their health by 2021.<sup>2</sup>

the potential is high to significantly impact cost — and outcomes — through monitoring and treating patients in new and different ways.

Our teams have developed technologies and solutions that help anticipate, adapt and react to patient needs beyond the hospital setting. More recently, a global study of heart failure patients indicated certain benefits of a specific Medtronic algorithm, found on the company's cardiac resynchronization therapy (CRT) devices, compared to conventional biventricular pacing therapy. The research showed a



59 percent reduction of a patient's odds of a heart failure hospital readmission within 30 days<sup>5</sup>

46 percent reduced risk of atrial fibrillation (AF) events<sup>4</sup>, and a 59 percent reduction of a patient's odds of a heart failure hospital readmission within 30 days.<sup>5</sup>

"The algorithm's personalized therapy helps keep more patients out of the hospital. On a system-level, this results in savings and less use of healthcare resources."

> Medtronic Further, Together

MEANINGFUL INNOVATION - PERSPECTIVE 1 OF 4

"The study results are clear in showing that CRT devices with adaptive algorithms reduce the risk of AF adverse events and related costs," said Prof. Dr. Med. Bernd Lemke, head of the Department of Cardiology at Lüdenscheid Hospital, Germany. "On an individual level, the algorithm's personalized therapy helps keep more patients out of the hospital. On a system-level, this results in savings and less use of healthcare resources."<sup>5</sup>

Like artificial intelligence (AI), great potential exists in areas such as biosensors, augmented reality, and material science. Additive manufacturing (3D printing) in the industry, alone, is expected to nearly triple by 2021.<sup>7</sup> Navigating this new era of even

**3X** 3D printing is expected to triple by 2021<sup>7</sup>

more personalized, precision medicine, our people work with patients and clinicians every day to identify and address unmet needs across the healthcare system.

"A lot of companies have mission statements, but here, it's a very patient-centric mission that drives us," says Mark Phelps, an electrical engineer who led an exploratory project more than 10 years ago called Deep Miniaturization. At the time, Medtronic employees recognized the potential benefits to patients if implantable devices could be 90 percent smaller. Now, the world's smallest pacemaker, and an insertable cardiac monitor that is the size of a small battery ---both built on the technology Phelps and his team developed --- are helping patients around the globe. Read about Deep Miniaturization.

These advances take time and teamwork.

"We hire people from different industries and different backgrounds, and get the voice of the customer from all over the world to bring new ideas together in a meaningful way."

"It starts with the first principles of science. You have to understand physics, biology, mathematics, and chemistry, and how materials and systems change when exposed to different environments," says Mark Breyen, a senior R&D leader at Medtronic. "We also hire people from different industries and different backgrounds, and get the voice of the customer from all over the world to bring new ideas together in a meaningful way." Breyen keeps a photo on his wall of a patient helped by several devices he created, as a reminder of why he works at Medtronic.

Diversity of thought, and a continuous cycle of input from patients and providers, informs the teams trying to develop solutions that will work in today's tech-driven, connected world. "The care I feel is unsurpassed," says Donna Pomeray, a deep brain stimulation patient invited to Medtronic to discuss ways the technology she relies on can be improved. "They not only listened to me, they truly wanted my input," she says about the Information Technology and Healthcare Innovation team she met with during her visit. Learn more about our Healthcare Innovation team.

Working with patients to advance our technology, we see great promise in wearable and implanted devices. While many are already smart, connected, and controlled by patient input, we expect Al will help them to automatically adapt and anticipate patient needs in the future and provide a new approach to chronic pain management. This could significantly reduce the need for prescription painkillers among certain patient populations — reducing U.S. opioid crisis costs \$78.5 billion per year<sup>8</sup>

hospital admissions due to overdose, and helping address a nationwide opioid crisis that currently costs the U.S. \$78.5 billion per year.<sup>8</sup>

Advanced design continues to enhance safety, quality, and durability of products. We already see significant progress in this space, with Medtronic minimally invasive tools that help surgeons with early detection and more targeted treatment of conditions like lung cancer and Barrett's esophagus, a leading predictor of esophageal cancer.

"The recovery was one of the simplest things I had to go through, considering the gravity of the situation. If the doctors hadn't found the cancer so early, I don't know what would have happened."

"The recovery was one of the simplest things I had to go through, considering the gravity of the situation," says lung cancer survivor Jackie Marino, who had her disease diagnosed and treated with the help of Medtronic surgical technology. "I was able to get back to my family and my life so quickly and haven't had to go through another treatment since the surgery. If the doctors hadn't found the cancer so early, I don't know what would have happened," she adds. Read Jackie's Story.

Innovation in the surgical space continues, and in the future we believe more surgical procedures will be facilitated by robotic, navigational or automated technologies. Research by Cambridge Medical Robotics suggests robotic surgery will grow to five times its present scale by 2025.<sup>9</sup> As more **5X** Robotic surgery will grow 5 times by 2025<sup>9</sup> procedures become facilitated by this kind of technology, we see great potential across the care continuum for patients, and intend to be a leader in advancing computer-assisted minimally invasive procedures well into the future.

### REAL WORLD APPLICATION HELPS EXPAND INNOVATION

Our partners at universities, hospitals, and healthcare startups help us combine a patient-centric mindset with rigorous clinical trials required to expand our impact. In 2016, Medtronic acquired HeartWare™, a startup that developed a left ventricular assist device (LVAD) to help those with advanced heart failure awaiting a transplant. Working with researchers at Duke University and University of Michigan, Medtronic has since received FDA approval for expanded use of the device to serve as a destination — or permanent therapy for patients who may not be eligible for a transplant.<sup>10</sup> Read the story.

Our growing global network of innovation centers — from Brazil to China — provides critical insight to the nuances that exist in healthcare delivery from one region to another. What patients and providers in India need, for example, may be different from what is needed in the Netherlands. Even within a single region, needs can vary. Our newest center, in Chengdu China, is strategically located to serve the needs of Central and Western China. Compared to more developed countries, the region lacks sufficient clinical training for healthcare professionals, with less than half the number of on-the-job medical training organizations compared to the eastern parts of the country.<sup>11</sup>

When we cannot physically be in a healthcare setting to experience what challenges exist, we rely on technology to bridge the gap. At our Applied Innovation Lab in Minnesota, a 360-degree "holodeck" video screen provides an immersive experience that helps scientists and engineers understand the needs of healthcare providers in remote regions and identify root causes of barriers to care. Such technology played a key role during a 2016 pilot program in Ghana and Kenya that addressed a high prevalence of hypertension in the region. The pilot has since led to the creation of Medtronic Labs Empower Health<sup>TM</sup>, a novel hypertension management model intended to reduce the burden and improve the efficiency of managing hypertension for both patients and clinicians in emerging geographies.<sup>12</sup>

When we cannot physically be in a healthcare setting to experience what challenges exist, we rely on technology to bridge the gap.

### DATA AND EXPERTISE UNCOVER POTENTIAL

The massive amount of data collected by today's wearable and implanted medical devices provides insight to the healthcare realities of the future. Announced in late 2017, a new partnership between Medtronic and Mercy Health established a data sharing and analysis network that will help record clinical evidence — using anonymous patient data from implantable devices — to further medical device innovation and patient access to care. The partnership combines Medtronic knowledge of medical technology with Mercy's expertise in integrating data analytics to care delivery.<sup>13</sup>

Medtronic frequently collaborates with scientific experts to gain deeper understanding of the complexities behind chronic diseases. "Medtronic brings our expertise in biomedical, electrical, and mechanical engineering together with scientists from fields such as neuroscience, cardiology, and urology," says Dwight Nelson, a chief scientist at Medtronic and expert on stimulation of the nervous system. "Diseases are not confined to a single body system, and modern therapies cross these artificial boundaries. When teams can reflect this diversity, we're able to gather the data needed to drive new therapies."

### "Understanding the large-scale shifts taking place in healthcare today helps us identify where the greatest opportunities exist."

Recognizing where we and our partners can have the greatest impact is also key to driving progress. "Understanding the large-scale shifts taking place in healthcare today helps us identify where the greatest opportunities exist," says Medtronic scientist Nathalie Virag. "When we combine those opportunities with our shared areas of expertise, we can make a real difference for the patients and providers we serve."

### INNOVATION HAPPENS BEST WHEN IT HAPPENS FAST

"The amount of knowledge that we're exposed to now essentially doubles every year," explains Hill. "Innovation comes from identifying ways to use that knowledge to create new technologies and solutions that provide meaningful value to our patients. Accelerating innovation through collaboration and partnerships helps improve our ability to deliver on the Mission."

Backed by teams of experts spanning disciplines and cultures, Medtronic creates forums intended to accelerate R&D. Internally, the company's Knowledge Center team built a communications infrastructure for technical experts across the organization. Internal scientific conferences and symposiums facilitate critical in-person teamwork, while supplemental online platforms like MIX (Medtronic Information Exchange) fill the gaps. In one year, more than 2,000 questions were posted to the company-wide online collaboration tool, and our experts generated nearly 6,000 responses.

Externally, we've seen firsthand how patients benefit from accelerated innovation. In 2016, the Food and Drug Administration (FDA) approved our latest technology for type 1 diabetes the world's first hybrid closed loop system --- with unprecedented speed. The system features a highly advanced sensor, the latest in insulin pump technology, and a dynamic algorithm working together to help patients manage their disease. For patients like 16-yearold Tia Geri, who participated in clinical trials of the system, the FDA approval was exciting and rewarding.

**104 days** required for FDA approval of the world's first hybrid closed loop system for type 1 diabetes<sup>8</sup>



"It feels really good to know that I had a hand in helping people," says Tia. "And I'm excited for the people who will get to use this new technology."<sup>14</sup>

Learn more about the science behind the system.

### A PROMISING FUTURE OF BETTER HEALTH

For patients like Ron, Donna, Jackie, and Tia — and the people who care for them — Medtronic is already making a difference. But there is still tremendous opportunity ahead.

"The opportunity to really change healthcare for patients is going to be completely evolved in the future. We intend to be leaders in that evolution."

### Medtronic

710 Medtronic Parkway Minneapolis, MN 55432-5604 USA Tel: (763) 514-4000 Fax: (763) 514-4879

Toll-free: 1 (800) 328-2518 (24-hour technical support for physicians and medical professionals)

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medtronic.com

We envision a day in the near future when capabilities like 3D printing will allow physicians to order customized devices manufactured for specific patients; and training on the latest surgical procedures will happen using augmented reality. Longer term, with the help of our partners, we anticipate a day when chronic disease management becomes effortless for patients, cancer treatment is nothing more than a day procedure, and debilitating heart and brain conditions are not only more treatable, but entirely preventable.

"The opportunity to really change healthcare for patients is going to be completely evolved in the future," says Hill. "We intend to be leaders in that evolution."

For the millions of patients we serve, the future starts today. We invite you to share in the possibilities, and help us take healthcare Further, Together.

### Learn more about innovation at Medtronic.

### REFERENCES

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MEANINGFUL INNOVATION - PERSPECTIVE 4 OF 4



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### Word Mark SIEMENS

Goods and

Services

IC 009. US 021 023 026 036 038. G & S: HOUSEMARK FOR A FULL LINE OF COMPUTER HARDWARE AND SOFTWARE FOR MEDICAL AND SURGICAL USE, PATIENT MONITORING, MEDICAL, SURGICAL AND PATIENT DATA MANAGEMENT AND CLINICAL INFORMATION; HOUSEMARK FOR COMPUTER SOFTWARE FOR PROCESSING, ANALYZING, DISPLAYING AND STORING PATIENT DATA, CLINICAL INFORMATION AND DATA COLLECTED BY MEDICAL DIAGNOSTIC APPARATUS AND PATIENT MONITORING APPARATUS; HOUSEMARK FOR A FULL LINE OF CLINICAL COMPUTER WORKSTATIONS; HOUSEMARK FOR A FULL LINE OF MEDICAL IMAGE ARCHIVING COMPUTER SYSTEMS, AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF COMPUTER APPARATUS FOR ONCOLOGY CARE, NAMELY, THERAPY DATA MANAGEMENT COMPUTER SYSTEMS AND TREATMENT SIMULATION COMPUTER SYSTEMS, AND PARTS FOR THE FOREGOING; BATTERIES FOR HEARING AIDS AND PRODUCTS TO ASSIST THE HEARING IMPAIRED, ASSISTIVE LISTENING DEVICES, AND AUDITORY TRAINING DEVICES; BATTERIES FOR ELECTROLARYNX APPARATUS, AND SPEECH AND VOICE AIDS; HOUSEMARK FOR HEARING INSTRUMENT ANALYZERS AND OTHER PRODUCTS FOR TESTING AND EVALUATING HEARING AIDS AND ASSISTIVE LISTENING DEVICES, COMPUTER HARDWARE AND SOFTWARE FOR PROGRAMMING AND REPROGRAMMING HEARING AIDS, COMPUTER HARDWARE AND SOFTWARE FOR TRACKING PATIENT AUDIOLOGICAL INFORMATION, AND PARTS FOR THE FOREGOING, FIRST USE: 19800000, FIRST USE IN COMMERCE: 19800000

IC 010. US 026 039 044. G & S: HOUSEMARK FOR A FULL LINE OF APPARATUS FOR MEDICAL AND SURGICAL USE, NAMELY, PATIENT MONITORING SYSTEMS, TELEMETRY SYSTEMS, PULSE OXIMETERS, RESPIRATORY CARE SYSTEMS, ANAESTHESIA SYSTEMS, ARRHYTHMIA SYSTEMS, AND VENTILATOR SYSTEMS, AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF MEDICAL DIAGNOSTIC IMAGING SYSTEMS, MAGNETIC RESONANCE SYSTEMS, TOMOGRAPHY SYSTEMS, AND COMPONENTS AND PARTS FOR THE FOREGOING;

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10/25/2018

	MOBILE MEDICAL APPARATUS, NAMELY, TRUCK TRANSPORTED MAGNETIC RESONANCE IMAGING SYSTEMS, AND PARTS FOR THE MAGNETIC RESONANCE IMAGING SYSTEMS; HOUSEMARK FOR A FULL LINE OF APPARATUS FOR MEDICAL AND SURGICAL USE, NAMELY, RADIOGRAPHY, FLUOROSCOPY, ANGIOGRAPHY, ARRHYTHMIA, ANGIOGRAPHY, X-RAY, MAMMOGRAPHY, LITHOTRIPSY AND PHYSIOLOGICAL RECORDING SYSTEMS, APPARATUS, COMPONENTS AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF NUCLEAR MEDICINE IMAGING SYSTEMS, TOMOGRAPHY SYSTEMS, COMPONENTS AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF APPARATUS FOR ONCOLOGY CARE, NAMELY, RADIATION THERAPY TREATMENT SYSTEMS, TREATMENT VERIFICATION SYSTEMS, PORTAL IMAGING SYSTEMS, AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF DIAGNOSTIC ULTRASOUND APPARATUS AND ULTRASOUND DIAGNOSTIC SYSTEMS, AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF HEARING AIDS ASSISTIVE LISTENING DEVICES, AUDITORY TRAINING DEVICES FOR USE IN THE TREATMENT OF HEARING LOSS AND PARTS FOR THE FOREGOING; HOUSEMARK FOR A FULL LINE OF PROFESSIONAL AUDIOLOGY PRODUCTS, NAMELY, APPARATUS FOR EXAMINATION AND DIAGNOSIS OF HEARING PROBLEMS, HEARING DIAGNOSTIC TESTING AND RECORDING APPARATUS, AND PARTS FOR THE FOREGOING; ELECTRONIC AND BATTERY OPERATED SPEECH AND VOICE AIDS, AND PARTS FOR THE FOREGOING. FIRST USE: 19540000. FIRST USE IN COMMERCE: 19540000
	IC 036. US 100 101 102. G & S: CREDIT SERVICES, NAMELY, PROVIDING LEASE PURCHASE FINANCING. FIRST USE: 19740000. FIRST USE IN COMMERCE: 19740000
	IC 037. US 100 103 106. G & S: REPAIR AND MAINTENANCE OF MEDICAL APPARATUS FOR OTHERS; REPAIR AND MAINTENANCE OF HEARING AIDS, ASSISTIVE LISTENING DEVICES, AUDITORY TRAINING DEVICES AND HEARING CONSERVATION PRODUCTS AND ACCESSORIES. FIRST USE: 19570000. FIRST USE IN COMMERCE: 19570000
	IC 041. US 100 101 107. G & S: EDUCATIONAL SERVICES, NAMELY, TRAINING OF OTHERS IN THE OPERATION OF MEDICAL APPARATUS. FIRST USE: 19610000. FIRST USE IN COMMERCE: 19610000
	IC 042. US 100 101. G & S: DESIGNING BUILDINGS FOR HOUSING MEDICAL APPARATUS, FOR OTHERS; LEASING SERVICES FOR MEDICAL APPARATUS; PROVIDING TECHNICAL AND ENGINEERING CONSULTING SERVICES RELATING TO CONFIGURATION AND SYSTEMS DESIGN IN THE FIELD OF MEDICAL APPARATUS; CONSULTATION SERVICES IN THE FIELD OF SELECTION AND OPERATION OF MEDICAL APPARATUS; PRODUCT DESIGN FOR OTHERS IN THE FIELD OF MEDICAL APPARATUS SYSTEMS. FIRST USE: 19610000. FIRST USE IN COMMERCE: 19610000
Mark Drawing Code	(5) WORDS, LETTERS, AND/OR NUMBERS IN STYLIZED FORM
Serial Number	75268934
Filing Date	April 3, 1997
Current Basis	1A
Original Filing Basis	1A
Published for Opposition	July 18, 2000
Change In Registration	CHANGE IN REGISTRATION HAS OCCURRED
Registration Number	2392496
Registration Date	October 10, 2000
Owner	

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(REGISTRANT) SIEMENS AKTIENGESELLSCHAFT JOINT STOCK COMPANY FED REP GERMANY Werner-von-Siemens-Str.1 München FED REP GERMANY 80333

Renewal Live/Dead	1ST RENEWAL 20110307
Affidavit Text	SECT 15. SECT 8 (6-YR). SECTION 8(10-YR) 20110307.
Register	PRINCIPAL-2(F)
Type of Mark	TRADEMARK. SERVICE MARK
Attorney of Record	LAWRENCE E ABELMAN

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# **Siemens Integrated Service Management**

Word Mark Goods and Services	SIEMENS INTEGRATED SERVICE MANAGEMENT IC 035. US 100 101 102. G & S: Business consultation in the fields of hospital organization and the administration of medical engineering systems. FIRST USE: 19971000. FIRST USE IN COMMERCE: 19971000							
	IC 037. US 100 103 106. G & S: Installation, maintenance and repair of medical engineering systems and the electrical systems in hospitals. FIRST USE: 19971000. FIRST USE IN COMMERCE: 19971000							
	IC 042. US 100 101. G & S: Engineering; technical consultation and research in the fields of medical engineering and the electrical systems in hospitals. FIRST USE: 19971000. FIRST USE IN COMMERCE: 19971000							
Mark Drawing Code	(1) TYPED DRAWING							
Serial Number	76199848							
Filing Date	January 22, 2001							
Current Basis	1A;44E							
Original Filing Basis	1B;44E							
Published for Opposition	January 7, 2003							
Registration Number	2805306							
Registration Date	January 13, 2004							
Owner	(REGISTRANT) Siemens Aktiengesellschaft CORPORATION FED REP GERMANY Wittelsbacherplatz 2 Munchen FED REP GERMANY							
Attorney of Record	Lawrence E Abelman							
Prior Registrations	2392496							
Disclaimer	NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "INTEGRATED SERVICE MANAGEMENT" APART FROM THE MARK AS SHOWN							
Type of Mark	SERVICE MARK							

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# MAGFORCE

#### Word Mark Goods and Services

#### MAGFORCE

IC 001. US 001 005 006 010 026 046. G & S: Chemicals for use in industry and science; magnetic nanoparticles, chemical particles having a nanometer size, chemicals and biopolymers containing nanoparticles for use in medical research and science; iron oxide based[ nanodots, nanoprobe, nano-sensing probe,] nanometals, nanoparticles for use in medical research and science; magnetites and maghemites for use in medical research and science

IC 005. US 006 018 044 046 051 052. G & S: Pharmaceuticals, pharmaceutical [and veterinary] products as well as compounds for healthcare, namely, anti-cancer preparations, preparations for the treatment of benign tumors[ preparations for the treatment or prophylaxis of arthritis, preparations for the treatment or prophylaxis of arthrosis, preparations for the treatment or prophylaxis of stenoses and restenoses, preparations for the treatment or prophylaxis of heart diseases, preparations for the treatment or prophylaxis of skin diseases]; pharmaceutical [and veterinary] products containing magnetic nanoparticles, namely, anti-cancer preparations, preparations for the treatment of benign tumors, [preparations for the treatment or prophylaxis of arthritis, preparations for the treatment or prophylaxis of arthrosis, preparations for the treatment or prophylaxis of stenoses and restenoses, preparations for the treatment or prophylaxis of heart diseases, preparations for the treatment or prophylaxis of skin diseases; contrast agents for medical use,] contrast agents for medical use containing magnetic nanoparticles; agents for diagnostic and medical purposes, namely, for imaging and detection of cancer, tumors,[ arthritis, arthrosis, stenosis, restenosis, heart diseases and skin diseases, ]agents for diagnostic and medical purposes containing magnetic nanoparticles; dietary supplements for medical purposes, baby food; medical plaster, dressing material for wounds and surgical use; teeth fillers and casting compounds for dental purposes, adhesives for dental plates, dental cement; deodorants, not for personal use, detergents for medical purposes, medical herb teas, ]chemicals for medical diagnostic use, namely, shift reagents, x-ray contrast agents, marker reagents for radiospectroscopic and x-ray spectroscopic, UV-, IR-, NMR- and mass spectroscopic measurements

IC 009. US 021 023 026 036 038. G & S: Electronic scientific devices, namely, [x-ray fluorescence spectrometer; nuclear magnetic resonance spectrometer;] devices for generating an alternating magnetic field; [optical apparatuses, devices and instruments, namely, monochromators;] information processing equipments and apparatuses, namely, computer hardware; computer software for operating all of the aforementioned devices recorded on magnetic data carriers, CDs, magnetic tape carriers, [laboratory incubators for use in science]

IC 010. US 026 039 044. G & S: Medical devices and instruments containing magnetic nanoparticles, namely, medical implants, stents, catheters,[catheter balloons,] implantable drug carrier, implants for sustained drug release, implants for chemo-embolization; medical devices and instruments coated with magnetic nanoparticles, namely, medical implants, stents, catheters, catheter balloons, implantable drug carrier, implants for sustained drug release, implants for chemo-embolization; systems with [magnets of high precision and appendant electronic instrumentations for nuclear magnetic resonance], medical technical devices, namely, hyperthermia devices and devices for local heating as well as components of afore mentioned devices for heating body tissue; hyperthermia systems for cancer treatment, namely, thermotherapy device comprising at least one coil for generating an alternating electromagnetic field; technical devices for stimulation of nanoparticles in an alternating magnetic field, namely, for heating body tissue, for activating pharmaceuticals attached to the nanoparticles, for release of pharmaceuticals attached to the nanoparticles; [medical instruments and apparatuses, for breathing, namely, oxygen masks and oxygen monitors, anesthesia devices, incubators for medical use, shielding devices for actino-therapeutic, x-ray-, diagnostic-, computertomografic and medical facilities, especially shielding protection walls, radiation protection gates and radiation protection curtains]

IC 042. US 100 101. G & S: Services for scientific and industrial research, provision of scientific literature for research, development and production; development services of nanoparticles, development services of medical devices and instruments coated with nanoparticles, development services of nanoproducts; development services referring to new medical devices and accessories for third parties; services for research and **development medical** devices and accessories; services for quality assurance of medical devices and accessories; analysis of magnetic and electromagnetic measurements for medical purposes, analysis of magnetic resonance tomographic measurements, creation of software for data processing, technical consulting services of third parties in the field of information and medical technology

Standard Characters Claimed Mark Drawing (4) STANDARD CHARACTER MARK Code Trademark Search Facility SHAPES-MISC Miscellaneous shaped designs Classification Code Serial Number 78474638 Filing Date August 27, 2004 **Current Basis** 44E **Original Filing** 1B;44E Basis Published for August 12, 2008 Opposition Registration 3598491 Number Registration March 31, 2009 Date Owner (REGISTRANT) MagForce Nanotechnologies GmbH GMBH FED REP GERMANY Spandauer Damm 130 Berlin FED REP GERMANY 14050

#### (LAST LISTED OWNER) MAGFORCE AG GMBH FED REP GERMANY MAX-PLANCK-STR. 3 BERLIN FED REP GERMANY 12489

Live/Dead Indicator	LIVE
Affidavit Text	SECT 15. SECT 8 (6-YR).
Register	PRINCIPAL
Type of Mark	TRADEMARK. SERVICE MARK
Attorney of Record	Shauna M. Wertheim, Esq.
Assignment Recorded	ASSIGNMENT RECORDED

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Goods and Services	IC 042. US 100 101. G & S: creating an online community for patients and healthcare professionals for the purpose of sharing information regarding medical procedures; providing an interactive website featuring technology that allows users to access clinical studies, white papers, and reference guides in the field of medicine; installation, repair and maintenance of computer software; providing temporary use of online non-downloadable software for creating, offering, hosting and delivering online demonstrations and presentations in the field of medical devices and surgical procedures; providing temporary use of online non-downloadable software to assist healthcare professionals with programming medical devices; providing temporary use of online non-downloadable software to assist healthcare professionals with programming medical devices; providing temporary use of online non-downloadable software to assist healthcare professionals with programming medical devices; providing temporary use of online non-downloadable software for use in diabetes management; providing temporary use of online non-downloadable computer software for monitoring, searching, tracking and reporting data in the field of diabetes; medical research in the field of medical and surgical apparatus, appliances, instruments and therapies; medical research in the development of surgical techniques and procedures; design and development of medical and surgical products, apparatus, equipment, instruments and preparations, and advisory services thereto; design, development, maintenance and updating of computer software for medical devices. FIRST USE: 20050901. FIRST USE IN COMMERCE: 20050901
	IC 044. US 100 101. G & S: technical consultation in the field of medical and surgical equipment, apparatus and appliances and instruments, namely, consultation regarding the selection and purchase thereof, and medical care, medical therapy and surgery. FIRST USE: 20050901. FIRST USE IN COMMERCE: 20050901

Mark Drawing (2) DESIGN ONLY

Design	02.01.02 - Men depicted as shadows or silhouettes of men; Silhouettes of men
Search Code	02.07.01 - Groups, males
	02.09.03 - Humans, including men, women and children, depicted reclining or sleeping; Reclining

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10/29/2018

	humans; Sleeping, humans 26.01.01 - Circles as carriers or as single line borders
Serial Number	86675490
Filing Date	June 26, 2015
<b>Current Basis</b>	1A
Original Filing Basis	18
Published for Opposition	December 29, 2015
Registration Number	4999865
Registration Date	July 12, 2016
Owner	(REGISTRANT) Medtronic, Inc. CORPORATION MINNESOTA 710 Medtronic Parkway Minneapolis MINNESOTA 554325604
Prior Registrations	2520724;2753382;2795107;AND OTHERS
Description of Mark	Color is not claimed as a feature of the mark. The mark consists of the silhouette of a standing human. Behind the silhouette is the outline of two humans, one of which is completely horizontal and the other is angled between the horizontal human and silhouette design. The human designs are depicted in front of a circle which intersects the human designs near the tip of the head and above the feet.
Type of Mark	SERVICE MARK
Register	PRINCIPAL
Live/Dead Indicator	LIVE
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10/29/2018



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A	Aedtronic
Word Mark	MEDTRONIC
Goods and Services	IC 042. US 100 101. G & S: Technical consultation in the field of medical and surgical equipment, apparatus, appliance and instruments, medical care, medical therapy and surgery; medical research in the field of medical and surgical apparatus, appliances, instruments, therapies and drugs; computer software design for others, computer programming for others, and updating of computer software; maintenance of computer software. FIRST USE: 20000601. FIRST USE IN COMMERCE: 20000601
	IC 044. US 100 101. G & S: Professional consultation in the field of medical and surgical equipment, apparatus, appliances and instruments, medical care, medical therapy and surgery. FIRST USE: 20000601. FIRST USE IN COMMERCE: 20000601
Mark Drawing Code	(5) WORDS, LETTERS, AND/OR NUMBERS IN STYLIZED FORM
Serial Number	78262170
Filing Date	June 13, 2003
Original Filing	1A
Basis	1A
Published for Opposition	June 22, 2004
Registration Number	2884251
Registration Date	September 14, 2004

	(REGISTRANT) Medtronic, Inc. CORPORATION MINNESOTA 710 Medtronic Parkway Minneapolis MINNESOTA 554325604
Attorney of Record	Trademark Dept.
Prior Registrations	2520725;2659890;2659891;2659906;2670396;AND OTHERS
Description of Mark	Color is not claimed as a feature of the mark.
<b>⊺ype of Mark</b>	SERVICE MARK
Register	PRINCIPAL
Affidavit Text	SECT 15. SECT 8 (6-YR). SECTION 8(10-YR) 20140805.
Renewal	1ST RENEWAL 20140805
Live/Dead Indicator	LIVE
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