Performance Sharing/Innovation Opportunities

1. Radiology Optimization
   - Radiology Performance Management Service
   - Advisory Services
   - Flex Force Coach
   - Flex Force Tech
   - Tech Credentialing (Super Tech)
   - CrewPlace
2. Stroke Cockpit
3. AI Rad Companion
4. Real Time Location Services (RTLS)
5. Virtual Cockpit
6. Service Parts Cost
7. Control Rad
8. Simulation Center
Countless new workforce challenges:

- Productivity Loss
- Disparate staffing systems
- Absentee-ism
- Staff shortages
- Patient Leakage
- Inefficient resource utilization
- Aging population
- Increased demand
- Overtime
- Global talent shortage

One end-to-end workforce solution:

**CrewPlace empowers you with two vital capabilities**

1) Optimize your workforce, and automate the task of assigning and dispatching full-time talent
2) Gain access to Siemens Healthineers curated talent on-demand
CrewPlace™

Unlock the latent power of the workforce

- Ordering portal
  - Request with one click

- Realtime reporting
  - Quickly identify problems

- Rules-based engine
  - Limitless criteria settings

- Geo-based location tracker
  - Know where they are on & off campus

- List view
  - Easy to read events & schedules

- Calendar view

Know where they are on & off campus
Open new clinical pathways, including care at home, retail clinics, and other population health initiatives.

Improve performance and clinical outcomes with Siemens Healthineers curated talent

Optimize your workforce by enhancing staffing, and automating the process of assigning and dispatching your full-time workforce

Solve staffing challenges with an on-demand talent pool across modalities and locations

Reduce overtime and absenteeism costs

Reduce productivity loss and patient leakage costs
# Radiology Optimization Investments and Potential Outcomes

<table>
<thead>
<tr>
<th>Investments</th>
<th>Potential Outcomes</th>
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<tr>
<td>Radiology Performance Management Service – IT Needed</td>
<td>Higher revenues</td>
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<tr>
<td>Advisory Services</td>
<td>Higher operating margin</td>
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<td>Flex Force Coach</td>
<td>Higher throughput</td>
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<td>Flex Force Tech</td>
<td>Productivity per scanner</td>
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<td>Tech Credentialing (Super Tech)</td>
<td>Reduce Turnover</td>
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<td>CrewPlace (Tech Scheduling software)</td>
<td>Order to Scheduled Appt time</td>
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</table>
Continuous Enhancement of the Stroke Care Pathway

Reduce time to therapy/needle

EMS Data Transfer*
Patient vitals and other relevant data transferred to stroke unit of the designated hospital

Diagnosis

Therapy

Follow-Up

Diagnosis

Therapy

Follow-Up

• Digital Twin of Stroke Center
• Operations Center
• Anticoagulation services automation

Treatment

Follow-up

Application and platform based on monitoring of patients:
• Alert system
• Case management
• Monitoring i.e. Afib, INR, fall events, etc.

Care management

Rehabilitation support

e.g. Leverage wearable technology

Early identification

Optimal data transfer

EMS Patient Triage Application*
Smart-phone application for pre-hospital provider in the field identification of stroke and its severity

Pathway Platform 4.0

Transformation Advisory as Enabler for customers

Better patient experience and outcomes

Restricted © Siemens Healthineers, 2018
AI-Rad Companion: A Comprehensive Platform

AI-Rad Companion is 510(k) pending, and not yet commercially available in the United States and other countries.
AI and Evolvement of the Delivery of Care
Your augmented reading aide

AI-Rad Companion is 510(k) pending, and not yet commercially available in the United States and other countries.
AI can help reading chest imaging faster
Non-contrast, non-gated chest CT

AI agents populate table of measurements and findings

Parsing lung lobes
Normal capacity

Scanning for lung nodules
Upper right lobe, solid, 8x4mm

Emphysema?
Substantial: Paraceptal, centrilobular

Airways
Normal

Low bone mineral density?
Normal density

Scanning for vertebra fractures
T6, mild
T8, mild

Cardiomegaly?
Normal heart size

Coronary calcium burden?
Proximal LAD severe

Aorta aneurysm, aorta stenosis?
Normal diameters

Aorta plaque burden
Diffused, mild severity

Fleischner guidelines: High risk

The concepts and information presented in this slide deck are based on research results that are not commercially available.
Real-Time Location System (RTLS) is a key enabler for the smart hospital of the future

Real-time location systems (RTLS) are used to automatically identify and track the location of objects or people in real time to help you understand how well your healthcare facility is performing.

**Benefit categories**

- Access & throughput
- Patient experience
- Quality, safety & compliance
- Staff assistance
- Resources optimization

*60+ dedicated use-cases*

This product is under development and not commercially available. Its future availability cannot be ensured.
Real-Time Location Systems help to improve clinical and operational pathways while reducing cost

Technological solutions that assists with identifying and tracking the location and status of assets and people in real-time within a healthcare facility.

- Less searching - more patient time
- Faster feedback - higher patient satisfaction
- Efficiency increase - cost reduction

**Resource optimization**
- Asset location
- Asset management
- Recall support
- Theft/loss avoidance

**Quality, safety & compliance**
- Contact tracing
- Hand hygiene
- Temperature monitoring

**Staff collaboration**
- Staff notifications
- Staff duress alert
- Automated time stamps

**Patient experience**
- Patient location
- Infant security
- Family notifications
- Patient feedback
- Nurse Rounding

**Access & throughput**
- Wait time
- Patient flow
- Digital wayfinding
- Bed/room capacity
- Environmental service
Real Time Location System (RTLS) is a key enabler for the smart hospital of the future

Real-time location systems (RTLS) are used to automatically identify and track the location of objects or people in real time, using wireless tags and fixed gateways.

Solution categories

- Asset Tracking
- Patient Mgmt.
- Indoor Navigation
- Staff Assistance
- Logistics Support
- 60+ dedicated use cases

Complete offering
- Hardware (Gateways, Asset Tags, Smart Beacons)
- Software
- Services (Project management, Installation services, System management, Maintenance)

Advanced use cases
- Advanced applications
- Advanced analytics – deep understanding of data
- Scalability (60+ use cases)

Continuously adding value
- Operational management
- Data- and SW-integration
- Workflow Management – learning out of data generated
- Consulting and up-front KPIs evaluation

This product is under development and not commercially available. Its future availability cannot be ensured.
Wake Forest Baptist Health and Infinite Leap can report measurable results, and up to 50% reduced patient wait times.

- **364K** patients per year using RTLS badges for enhanced patient experience.
- **$500K** annual reduction in equipment purchases.
- **$10M** validated return realized within the first 4 years of the project.
- **$300K** annual savings by automated temperature monitoring.
- **$2M** value of unproductive hours recovered.

The results of our partner Infinite Leap’s customer described herein are 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, level of IT adoption) there can be no guarantee that other customers will achieve the same results.
syngo Virtual Cockpit:
Creating a center of excellence for remote imaging acquisition, training and support
Siemens MRI installs – Midwest

174!!!
ControlRad™
Reduce Radiation Without Impacting Image Quality or Workflow

No Clinical Value to Radiate Entire Field-of-View at Same Levels

1. Deliver optimal image quality in clinically-relevant region
2. While maintaining appropriate resolution in periphery
3. Resulting in 75%+ radiation dose reduction to patient, physician and cath lab staff

Build Staff Engagement
Strengthen Quality Outcomes
Enhance Patient Experience

Enhance Patient Experience
ControlRad™
Product Overview

ControlRad is an integrated system of components that optimizes the X-ray beam to deliver the highest image quality inside the region-of-interest (ROI) while maintaining appropriate resolution in the periphery.

1 Certified Tablet
2 Dynamic Filters move in real-time
3 Proprietary Image Processing

Certified Tablet Interface
Dynamic Filters

Pending 510(k) clearance, not available for sale in the United States.
ENDOVASCULAR SIMULATION SUITE
What if we could create a digital twin of the patient’s heart?

- Multiscale, Personalized Physiological Model of the patient’s heart
- Similar dimensions, electrical signal activation, muscle contraction, ejection fraction, pressure dynamics
- Mechanistic and statistical modeling
- Model is under our control
- Potential to test and prescribe best therapy for the patient