Medicalis Workflow Orchestrator

Unlock efficiency with radiology workflow orchestration
No system variability. No capacity variation. No workload imbalance.

Medicalis Workflow Orchestrator is an enterprise level solution, which organizes and optimizes radiologist reading across disparate sites, radiology practices, and IT platforms. The Medicalis solution orchestrates productivity, performance, and communication on a single, vendor-neutral, integrated layer to drive efficient Imaging Service Line operations for regional Integrated Delivery Networks (IDNs), Radiology Groups, and imaging centers and to provide the foundation for imaging services expansion including new teleradiology opportunities.
“By utilizing Medicalis technology integrated with our enterprise EHR, Weill Cornell Imaging hasn’t just optimized its current safety and operational workflows, it’s also well positioned for further reimbursement, regulatory, and operational requirements.”

Keith Hentel, MD, MS
Executive Vice Chairman, Vice Chairman for Clinical Operations, Associate Professor of Clinical Radiology at Weill Cornell Medicine, Department of Radiology, New York Presbyterian Hospital, USA

1 The statements by customers of Siemens Healthineers 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.

Provide optimization in an evolving healthcare landscape.

Maximize clinical and operational insights to improve the standard of care.

Ensure consistent quality and patient experience across the Imaging Service Line despite disparate systems, providers, and locations.

Leverage the best resource to drive the best outcome for the patients.

Use the economy of scale and skills to improve turnaround times.

Enable timely response for critical cases through integration with 3rd party automatic detection and classification tools.

Orchestrate a unified team and resources across organizational and IT boundaries.

Normalize and standardize best practices across the organization.

Improve standard of care and increase reading within subspecialty.

Fuel growth with operational efficiency.

Offer wider variety of services to patients under improved SLAs.

Provide a turnkey set of solutions to enable future business expansion.
Not just limit the challenges …

Increase in exam volume, reduction in resources and the constant pressure to do more with less² are all very familiar themes in today’s healthcare landscape. For Imaging services, the demand will only continue to increase due to ageing population³, and growing prevalence of chronic disease, and thus the obvious need to maximize efficiency and leverage new technologies to increase radiologist productivity.

These challenges are often magnified by the complexity of legacy systems and the variation in capabilities of existing PACS and other IT systems, and with it the ability to adapt and leverage new breakthrough technologies such as AI applications. In addition, the ongoing consolidation of hospitals and radiology practices⁴ with disparate technology introduce additional obstacles to maximize overall operational efficiency.

The radiologists’ workload is steadily increasing
• Over the past years, demand for complex MRI & CT imaging in the UK has increased by 9% but workforce has only grown by 3%²

Radiology consolidation in the US
• Radiology practice consolidation:
  Fewer but bigger groups over time⁴

<table>
<thead>
<tr>
<th>The fraction of all radiologists in groups</th>
<th>2014</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2 members</td>
<td>3.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>3 to 9 members</td>
<td>10.2</td>
<td>6.7</td>
</tr>
<tr>
<td>10 to 24 members</td>
<td>18.2</td>
<td>14.1</td>
</tr>
<tr>
<td>25 to 49 members</td>
<td>16.6</td>
<td>15.1</td>
</tr>
<tr>
<td>50 to 99 members</td>
<td>13.3</td>
<td>11.5</td>
</tr>
<tr>
<td>100 to 499 members</td>
<td>15.7</td>
<td>21.8</td>
</tr>
<tr>
<td>&gt; 500 members</td>
<td>22.9</td>
<td>28.7</td>
</tr>
</tbody>
</table>

Increase in volume
• 18% growth of imaging as a result of the aging population in the U.S. by 2025³

¹The Royal College of Radiologists. Clinical radiology, UK workforce census 2018 report. London: The Royal College of Radiologists, 2019
⁴JACR: Mar 2020 https://www.jacr.org/article/S1546-1440(19)30181-4/fulltext
Medicalis Workflow Orchestrator focuses on providing adaptable solutions that leverage existing investments to help you thrive in this challenging and evolving healthcare landscape. The system includes flexible tools to help you design the solution you need to meet your operating goals. Key components include:

**Strong integrated layer**
- A bridge to help reduce variation by aggregating data from multiple sources, including AI applications
- A rich set of APIs to enable the use of imaging and reporting tools of choice
- An ease of access tool with one time single sign-on to reduce unnecessary interruption

**Workflow orchestration**
- An advanced worklist management to strategically align the health system and radiologists
- A customizable worklist allocation to balance the radiologist’s workload based on availability, subspecialty, credentialing among other factors
- A dynamic worklist prioritization based on clinical priority (including AI findings), service level agreement and targeted turnaround time etc.
- A case distribution and monitoring logic to ensure fair and efficient workload distributed, minimize any potential decline in turnaround time and to enable prompt attention when needed

**Quality control**
- A built-in peer review workflow to help ensure the reading quality
- An enhanced tool to help radiologists provide image quality feedback for technologists

**Communication and collaboration**
- A context-sharing chat to improve the collaboration between the radiologist and radiology support staff regardless of geography
- A dedicated workflow to facilitate collaborations in specific scenarios such as call report, problem and interrupt workflows

**Information access**
- An adaptable worklist for a consolidated view of radiologist workload
- A unified access to patient record aggregated form across multiple sources
- An intuitive layout with access to clinical documents, custom, and standard online forms
- A clear visual to manage preliminary reporting and discrepancy tracking to help facilitate the daily work and improve radiologist productivity

**Reporting and analytics**
- A management reports package to provide enterprise-wide visibility, optimize resource utilization and leverage the economies of scale
- A standard report set to help make data driven decisions to enhance operational efficiency
- A pre-prepared data set to help real-time access to measure quality and implement correction measures when needed
- A dynamic interface to help create new reports, maximize the value of data, benchmark the quality, performance, and productivity trends of the imaging service line to optimize productivity and increase efficiency

**Challenge the limits**
Maximize the value of your investment.

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Increase Quality Outcomes  
Lower Costs  
Value

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How does it work?

Built as an open system with a strong API, Medicalis Workflow Orchestrator is a true vendor neutral solution, with proven interfaces to most common PACS and EMR systems.

Our workflow orchestrator offers you the flexibility to choose the best of breed system, while leveraging all your earlier investments by integrating with other systems such as:

- One or more diagnostic viewers of your choice
- One or more dictation systems of your choice
- Multiple PACS systems that you may have
- Multiple VNA systems that you may have
- Multiple EMR systems that you may have

By standardizing the operation and optimizing the worklist allocation through highly configurable assignment rule, the radiologist has access to their daily worklist with dynamic real time updates based on clinical and operational priorities. The system curate relevant patient information and prior studies, and presents all relevant information in one view for the radiologist when ready to read the exam, providing an excellent experience for the radiologist and as a result a better outcome for the patient.

Organize
- Normalize the data and create a “gold standard”.

Optimize
- Track resource utilization and subspecialty distribution.

Orchestrate
- Balance workload based on large set of parameters.

Monitor
- Dynamically update worklist based on clinical & operational priorities, including AI findings.
Proven outcomes

Medicalis Workflow Orchestrator contributed to up to 50% decrease in report turnaround time\(^5\)

Medicalis Workflow Orchestrator contributed to enhanced turnaround time with >90% of post-procedure reads completed within 90 minutes\(^6\)

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\(^5\) Mercy – Enterprise imaging platform supports ‘anytime, anywhere’ radiology, HIMSS Insights 7.4

\(^6\) Optimizing Patient Centric Care through Medical Imaging Services – Weill Cornell Medicine Department of Radiology’s Pathway to Thriving in a Changing Healthcare Environment, Frost & Sullivan
The convenience of local practice, the advantage of a consolidated service line

We fully appreciate the challenges that come with variability and the lack of standardization due to consolidation and rapid expansion. We designed a system that helps you turn these challenges into opportunities.

For patients
- Timely subspecialty reading
- Faster turnaround time
- Reduced time to treatment
- Satisfied patients

For referring providers
- Timely subspecialty reading
- Minimize delays in treatment
- Help diagnostic accuracy
- Satisfied physician

For radiologists
- Balanced workload
- Better data access
- Improved communication
- Improved peer review
- Satisfied radiologists

For administration
- Maximize capacity
- Improve operational efficiencies
- Maximize investment
- Increase productivity
- Enable workforce elasticity and workload scalability
“Now, radiologists have all the pieces of the puzzle to help them really make a better diagnosis. And, that simply leads to improved patient care.”

Steve Bollin
Regional vice president of radiology support services at Mercy, USA

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Improved communication.
Improved healthcare delivery.
Controlled cost. Satisfied staff.

Workflow orchestrator is not limited to worklist allocation, Medicalis workflow orchestration is a modular solution that provides additional value to all the imaging service line stakeholders.

It is part of the Medicalis Imaging Service Line solution that helps transform disparate departmental imaging operations into an integrated imaging service line.
The products/features (here mentioned) are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.