FUEL GROWTH IN IMAGING

How to Commercialize your Imaging Service Line to Fuel Growth in a Consolidating US Healthcare Market

FROST & SULLIVAN BRIEF

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Ongoing Consolidation of the US Hospital Landscape

2017 has shaped up to be another big year for healthcare industry consolidation in the United States. The number of mergers and acquisitions that occurred among hospital chains surpassed that of 2016. As patterns of this activity become clear, there does not seem to be any end in sight to the consolidation phenomenon. If it follows its course like it has over the last several years, in just a few years the hospital provider landscape will look very different.

For instance, today several hundred hospitals still operate on a stand-alone basis, while at the opposite end of the spectrum, only a few very large multi-site systems with several dozens of hospital facilities exist. Soon, these very large networks will prevail, with some spanning state-wide or crossing state borders, such that all-in-all the U.S. will be left with between 400 and 600 different hospital organizations, down from the current 1,600.


Source: Frost & Sullivan
Four Pillars of Success for an Enterprise-Wide Integrated Imaging Service Line

It is quite easy to rationalize the ongoing consolidation of hospitals into fewer larger integrated delivery networks (IDN’s) and health systems, with the quest to reduce costs and reap higher value from the system being the main drivers.

However, the reality is that the consolidation is not yet producing the expected economies of scale. At the level of medical imaging, integrated imaging service lines (ISL) are the key to start fueling a virtuous cycle of cost efficiency and growth.

While ISL’s are a fairly new concept, the four pillars for success have become a lot clearer today: they are about Technology Management, Enterprise Integration, leading to Cost-Efficiency, and eventually to Business Growth.

Once the fully functional ISL begins to run with higher productivity and less waste is the time to optimize each of its constituents and commercialize the ISL within and beyond the catchment area.

With the “boxes” and “wires” of the ISL in place, insights and efficiencies emerge that can be used to align all imaging locations around a single operating plan while fine-tuning the operating model of each one.

A more holistic and results-driven approach to software and service deployment, engaging fewer vendors as partners who are aligned with the organization for mutual success.

The technology and service components that constitute an ISL are put to the service of their end-goal, which is to ready the ISL for its consolidation and commercialization.
**NEW ACQUISITIONS**

CREATE a simple, replicable and cost-effective way of getting a newly acquired facility on-board the ISL, without the burden of managing an additional silo or the need for an expensive forklift upgrade.

**FLEET-WIDE MANAGEMENT**

STREAMLINE the processes for maintaining, procuring, and replacing imaging equipment assets at the fleet level, working with fewer, better-aligned vendor partners, which will free-up capital and predict costs.

**VENDOR ENGAGEMENT**

LEVERAGE high-value-adding services such as transformation, advisory, and managed services, working with vendors who are willing to take ownership and hold themselves accountable to the desired outcomes.

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**Paradigm Change**

From Running a Collection of Departmental Imaging Operations…

Recent merger
- **INTERNAL COMPETITION**

Recent acquisition
- **INTERNAL REDUNDANCY**

Recent joint venture
- **LEAKAGE**

…to Driving an Integrated Imaging Service Line

Seamless image exchange and consolidation across the enterprise

Virtual reading environment for on-site, remote and out-of-network imaging professionals

Fleet management of imaging equipment assets

ISL designed around the needs of its covered patient lives

Economies of scale and commercial outreach of ISL with price transparency across hospital and ambulatory locations

Enterprise-orchestrated and load-balanced imaging workflows

Radiologists working with greater efficiency and productivity and leveraged for their specific skills

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Source: Frost & Sullivan
**Physician Alignment**

**Ensure** that the various sites of service and professional resources comprising the ISL contribute to one operating plan that produces, maintains, and measures alignment between health system, physicians and patients.

**Operating Plan**

**Define** service level expectations for the ISL so that patients receive the same quality of service irrespective of time, location or radiologist localization, and such that ISL constituents can be benchmarked against one another as apples-to-apples.

**Clinical Collaboration**

**Capitalize** on the digital maturity of medical imaging, as one of the three major pillars of diagnostics alongside pathology and laboratory services, to drive new collaborative workflow models across the service lines that support clinical decisions.

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**Math of a Typical 1-Million-Study Imaging Service Line**

**ISL Relative Value Units (RVU) Per Study Ratio**

<table>
<thead>
<tr>
<th>Service Line</th>
<th>RVU</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI</td>
<td>🟢</td>
</tr>
<tr>
<td>Interventional X-Ray</td>
<td>🟢</td>
</tr>
<tr>
<td>Nuclear Imaging &amp; PET</td>
<td>🟢</td>
</tr>
<tr>
<td>CT</td>
<td>🟢</td>
</tr>
<tr>
<td>Mammography</td>
<td>🟢</td>
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<tr>
<td>Ultrasound</td>
<td>🟢</td>
</tr>
<tr>
<td>Fluoroscopy</td>
<td>🟠</td>
</tr>
<tr>
<td>X-Ray</td>
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</tbody>
</table>

**Radiology Imaging Service Line Revenue**

1,000,000 Study Volume

- **Technical Component** $133.5 Million
- **Professional Component** $98.7 Million
- **Total** $133.5 Million

**ISL Study Distribution**

- MRI
- Interventional X-Ray
- Nuclear Imaging & PET
- CT
- Mammography
- Ultrasound
- Fluoroscopy
- X-Ray

**ISL RVU Distribution**

- Interventional X-Ray
- Nuclear Imaging & PET
- MRI
- CT
- Mammography
- Ultrasound

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**Note:** ISL Assumptions:

- Technical to Professional RVU Ratio 2.700
- Avg Payer Mix as % of Medicare 105.00%
- Non General Practitioner with Special Interest Adjusted per RVU reimbursement $35.80

**Source:** Frost & Sullivan
Outcomes That Can be Measured and Improved
Thanks to the Economies of Scale and Skill of an Integrated ISL

- **Analytical power to minimize impact of “sticks” and maximize “carrots” from the payors by measuring quality, value, and performance**
- **Consolidated equipment and IT maintenance contracts with fleet-wide asset management**
- **Ability to leap over the initial catchment area and provide imaging contracts to outside locations**
- **Uniform service level agreement leading to the same level of care regardless of time and place**
- **Larger TIN (Tax ID) giving the system and radiology groups increased leverage with local commercial payers**
- **Aligned imaging outreach supporting population health management with greater screening program adherence**
- **Inclusive analytics approach allows you to measure quality, value, performance and compare all locations equally**
- **Integrated approach to meeting imaging appropriateness mandates while personalizing local care standards**
- **Comprehensive solution to address leakage by widening the pool of imaging sites of service for patients**
- **Orchestrated imaging workflow to minimize variability in care across the system**
- **Personalized scheduling across the service lines giving more flexibility to patients**
- **Source: Frost & Sullivan**
Illustration of Four Organic and External Growth Opportunities
Realized Over 18–30 Months from Integrating and Commercializing Your ISL

**ORGANIC GROWTH**

Local health system market density

- 10% increase in MRI study volume within IDN
  - $2.9 M increase in total revenue

- 15% increase in CT study volume
  - $7.18 M increase in total revenue

**EXTERNAL GROWTH**

Beyond local health system area

- Picked up an additional 20,000 CT and 10,000 Ultrasound studies via teleradiology
  - $1.6 M increase in professional revenue

- Picked up an additional 200,000 exams in Florida
  - $6.9 M increase in professional revenue

**OUT-OF-NETWORK REFERRALS**

- RECOVERED AND PREVENTED NETWORK LEAKAGE

**EXPANDED CATCHMENT AREA**

**REFERRAL OPTIMIZATION**

PRIORITIZE internal resources by exploiting the investment into a high-availability platform of specialized imaging experts and latest-greatest imaging capabilities, as a way to increase out-of-network referrals and minimize leakage.

**CATCHMENT EXPANSION**

DISTRIBUTE the ISL workload in an orchestrated manner across available resources while developing tele-imaging activities as non-predatory ways to obtain adjunctive sub-specialty and final coverage.

**NEGOTIATION LEVERAGE**

CONSOLIDATE the ISL financials into a single Tax ID and demonstrate the reduced cost per RVU led by lateral consumption of additional ISL capacity, in order to gain additional leverage in shared-risk contracting and payment model negotiations.

**Summary**

Total revenue increase from these 4 ISL commercialization items over 18–30 months

- $18.6 M or an increase of 13.9% of $133 M ISL

Source: Frost & Sullivan
Technology Investments

The “Why” Should be Driving the “What”

The way medical imaging organizations continue to justify and realize their technology investments is proving increasingly more unsustainable. The imperative for value-based healthcare imposes on imaging operations to augment and demonstrate their value and that of their new investments, so as to get aligned with institutional-level value-based purchasing frameworks.

The best-practice for reaching this goal is to invest in appropriate, carefully selected and planned professional imaging resources, additional capacity, technology and services that can combine into one integrated ISL. Without a clear purpose and validated contribution to an ISL operating plan, new investments pose the risk of adding complexity, redundancy or liability to the imaging enterprise.

Accomplishing an ISL that can be commercialized and grown in a controllable manner is, therefore, a process that must start with setting out the rationale and desired outcomes for its various constituents and stakeholders, including vendors as partners.

If healthcare is to start approaching the efficiency levels that have been attained in virtually every other industry, the field will have to come to terms with the idea that industrialization is an opportunity for collective betterment, not a threat to the people involved.
NEXT STEPS

Setup a meeting with your Imaging Service Line team members and discuss this paper and the “why” and “what” of your imaging service line.

Interested in learning more about the topics covered in this white paper? Call us at 877.GoFrost and reference the paper you’re interested in. We’ll have an analyst get in touch with you.

Visit our Digital Transformation web page.

Contact your local Siemens representative and learn about their Service Line Solutions. To learn more visit the Siemens Healthineers population health page.

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