

Imaging Service Line



Current vocabulary often falls short when trying to express game-changing new concepts and ideas. In the mid 80's, the idea of a "world wide web" could only be discussed first by creating some new language—i.e. "internet," browser," "website," "search engine," "online," etc.

The same is ture today for the concept of an "Imaging Service Line."

To unleash and fully appreciate the power and potential of an Imaging Service Line, some new language is needed—i.e. "Lateral Consumption," "Franchise View," "Showing Up Flat," "N+1 viewer," etc. This glossary helps to explain how software enables IDN's to first envision and then operate as an enterprise-wide Imaging Service Line.

Note: While all the terms are well worth a read, we've flagged the some of the most important ones.



Terms for Radiologists



Terms for Administrators

actionable insight

Information that can be acted upon or gives enough insight into the future providing clarity for decision makers.

alignment, it is only everything

Health systems are looking for ways to reduce cost, improve quality and provide service level within imaging, while Radiologists require productivity, efficiency and clinical excellence. Both sides need to ensure they maintain alignment with each other as you transition to an Imaging Service Line.

big three

Based on industry consolidation reports like those presented at the Advisory Board's 2016 Annual Imaging National Meeting¹, the belief exists that the US Healthcare market continues to consolidate down to 3 or less IDNs per state for a potential total of 150 IDNs nationwide. This matters to Imaging Service Line strategy as there will be no shortage of "next hospitals" being added to regional IDNs in the coming years. Medicalis Workflow Orchestrator is able to seamlessly connect disparate hospitals, systems, and radiology groups into a single Imaging Service Line.

bigger TIN (tax ID number)

A Radiology Group running more volume through their TIN gives them more negotiating leverage with the commercial payers in their state compared to their lower volume peers. TIN is always determined state by state.

boxes and wires

Broadly refers to all the "behind the curtain" IT infrastructure stuff. ManyIT led projects often unsuccessfully jump right to the "boxes and wires" like VNA and skip the operating plan aspects of the Imaging Service Line.

brain of the imaging service line

The Medicalis Workflow Orchestrator is the "brain" for your Imaging Service Line.

bring your own flashlight to the future

Future payment models will have components related to measuring things like quality, value, and performance. An Imaging Service Line should be able to generate its own analytics to shine the flashlight on things like "Length of Stay." It is always better to be the one holding and directing your own analytics flashlight as opposed to having a third party shine their light on you to define performance.

can on a string

When the only way a health system will allow interpretation of their studies outside their 4 walls is to provide one of their locked down/standalone PACS workstations to their Radiology Group. This makes things like reading finals and sub specialty reading on 3rd shift for a large distributed Radiology Group very challenging especially when the IDNs are looking for final and sub specialty reading 24x7.

centralize and standardize

Regional IDNs continue to grow and want to benefit from their new found economies of scale and skill in all areas of their operations and imaging is no exception. IDNs don't want to run Imaging as a collection of 10+ different hospital-based Radiology Departments. For example, Medicalis Workflow Orchestrator can enable things like Sub Specialty and Pediatric coverage on the 2nd and 3rd shift with a volume of 1M-2M studies annually, but still allow the local groups to operate separately during 1st shift.²

combine two different things to make one new, bigger, better thing

Imaging Service Lines that have an operating plan and workflow orchestration layer are able to combine two dissimilar genres of radiology providers and run them as a single entity with accretive benefits. Some of the more common pairings are: Ground/Cloud, Daytime/Nocturnal, Academic/Private or Salaried/Variable Comp.

- ¹ Advisory Board 2016 Annual Imaging National Meeting, Imaging's System Advantage
- ² The statements by Siemens' customers 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.

comparative insights x 3

Measuring and proving things like quality, value, and performance with analytics is an evolving field. When introducing new concepts like this, it is often easier to present your performance with two other comparable entities so you can understand where you rank against "apples to apples" peer groups.



connect what you got (also known as "workflow first")

When a workflow orchestration layer is done first and connects all hospitals and their disparate RIS/PACS/EMR and radiology groups to create a virtual Imaging Service Line on day 1 instead of waiting for a full IT-led Deconstructed PACS implementation. This approach allows regional IDNs and radiology groups alike to immediately benefit from economies of scale and skill while still in fee-for-volume and struggling with rising ED imaging volume.



cookie cutter

Having a single operating plan and technology stack to take on a new hospital or contract and incorporate it into your Imaging Service Line. Also referred to as "Turn-Key" and "Rinse & Repeat" method.

counting belly buttons

RIS systems were built to schedule and manage patients in Radiology. Interventional Radiologists move between various modalities throughout the day and interventional procures tend to generate many billing codes. When you are looking at the productivity and capacity of Interventional Radiology, it is desirable to look at patient encounters (belly buttons) rather than billing codes to determine how much diagnostic reading is possible from your interventionists in order to optimize your Imaging Service Line.

dicom plumbing

Myopic thinking when it comes to Imaging Service Lines which believe Imaging Service Line nirvana can be achieved if only they could move DICOM differently (plumbing) to overcome the limitations of legacy PACS viewers.

dine from the menu

If you are a Radiology Group that believes that consolidation of health systems will continue, it is better to partner with the Regional IDNs that are doing the consolidating (dining from the menu) vs being acquired (the stuff on the menu). See "early or too late."

dirty in, dirty out (DIDO)

The data needed to run an Imaging Service Line that spans multiple different hospitals, radiology groups and IT systems is more than what is found in each hospitals RIS or EMR. Additional attributes are needed to give you the granularity needed to control workflow across all locations. Failure to normalize data to an enterprise standard will result in dirty data inputs and diminish the functionality of your Imaging Service Line and make growth much harder to operationalize.

early or too late

The shift away from fee-for-volume is a massive disruptive change to our healthcare system. When dealing with change this large, you are either early to the party or too late. Our customers benefit from our experience to ensure they are never "too late."

easy button

Regional IDNs are looking for larger partners who can scale up with their growth and provide an "easy button" and share in risk.

fee for something different

Fee-for-volume is giving way to reimbursement tied to quality, value, and performance. While there is uncertainty as to how and when it will occur, Imaging Service Lines that can demonstrate quality, value, and performance will have an advantage over those that cannot.



franchise view

The ability for a regional IDN or mega radiology group to see all their locations in a similar fashion the way that a restaurant franchisee can see all their locations in a given area. This is also known as "apples to apples" and leads the way to comparative insights even if an Imaging Service Line is being covered by several different private radiology groups.

fungible

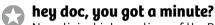
Defined as the ability to replace or be replaced by another identical item; mutually interchangeable. Too many early M&A attempts to consolidate Radiology Groups mistakenly believed that Radiology was like Emergency Medicine or Anesthesiology and the MDs were fungible, not realizing the differences between diagnostic, women's imaging, teleradiology and interventional radiology.

ground and cloud

GROUND generally refers to traditional Radiology Groups with onsite Radiologists who read from within the 4 walls of a hospital vs the CLOUD which is based on teleradiology and consumption of studies outside the 4 walls of a hospital.

hands of the department are the face of the department

Interventional Radiology is often the most visible member of a Radiology Group to the referring MDs of the hospital.



Non clinical interruptions of the Radiologist. These interruptions are often symptoms of poor workflow between techs and Radiologists.

home court advantage

When a Radiologist doesn't care where they are reading or where the study is coming from, the workflow and presentation of studies all looks the same and feels the same for the Radiologist, which makes them more efficient and productive.

imaging service line

The future of radiology where technology is married to an operating plan to ensure strategic alignment between IDNs and Radiologists by providing the growing IDNs service levels with lower cost while improving productivity and efficiency for Radiologists so they can manage a collection of radiology departments as a single entity.

inside the 4 walls

When you are referring to a Radiologist being onsite at a hospital.

is it about the seat or who is sitting in the seat?

All Radiology Groups have sub specialists, but often work distribution is dictated by Rads schedule/ shift/slot (the seat) as opposed to the Radiologist sitting in the seat that day.

if you can't measure it, you can't prove it

We are moving away from fee-for-volume to "fee-for-something-different." The ability to measure things like quality, value, and performance is a natural by-product of putting in a workflow orchestration layer.



kill the parrot

Coined by Inland Imaging in Spokane Washington. It refers to eliminating any workflow where a Radiologist must transmit information from one system into another system as part of the interpretation process. 80%¹ of the cost of imaging is the Radiologists themselves. Having them "parrot" or "copy/paste" information from one system into another system is not an effective use of the most expensive part of your Imaging Service Line.

lateral consumption

When a Radiologist interprets a study that was acquired at another facility. This is most often done to enable reading within sub specialty or to maintain service levels related to TAT or final interpretations.

LCP (license, credential, privileging) lag

The unfortunate reality is when a Radiology Group or IDN takes on a new hospital and their Radiologists must wait for LCP to be in place so they can bill for the studies that they read. If an IDN focused radiologists on volume from 3 or less states each, they could potentially minimize the impact of LCP lag and logistics since each state has its own LCP requirements, and completing all that paperwork could take months.

left without being seen

A common measurement for the ED related to patient throughput. Radiology impacts the ED so analytics from the Imaging Service Line need to provide actionable insight that Radiology can share with the CMO and various quality committees.

¹ University of Utah School of Medicine, Getting Serious About Radiology Costs, Jan 31, 2017 www.medicine.utah.edu/radiology/ news/2017/01/anzai-serious-about-costs.php

local first

This is one of many ways that Medicalis Workflow Orchestrator is able to orchestrate workflow so local studies are read by the Radiologist onsite as the preferred state before incorporating the CLOUD Radiologists. This ensures TAT is not violated for a given study. A regional IDN that is served by several different Radiology Groups can leverage a single workflow and service line but still practice radiology "locally" based on Radiology Group contracts.



magic RVUS from the sky

When an Imaging Service Line is able to grow and read volume from new locations and those RVUs are just appearing on the Medicalis worklist for the Radiologists reading within their sub specialty. It is inconsequential where the studies come from because it all appears the same to the Radiologist.

minimize variability in care

CMO's and Regional IDNs want to minimize variability within an Imaging Service Line so that it is inconsequential where the patient was seen or who was reading it because it is all treated the same to maintain a standard of care across all locations with minimal variations.

move studies, not radiologists

Depending upon the service offerings at a given facility, most Radiologist exams could be interpreted by a remote Radiologist sitting anywhere (unlike Surgical Service Lines). This is why growing regional IDNs like to lead with the Imaging Service Line when incorporating new locations.

n+1 viewer

The concept of having a Radiologist using the local hospital PACS viewer when onsite (the "n" viewer) plus one additional viewer to read all other studies coming from any location outside their 4 walls. The basic premise is that Radiologists can handle using 2 simultaneous viewers on any given shift, provided your workflow orchestration layer can mange several viewers simultaneously and efficiently. Many of the server side rendering PACS viewers (the "+1" viewer) present advantages that are ideal for lateral consumption of studies with a fast growing Imaging Service Line.

NLP

Natural Language Processing. The final product for Radiology is a report that is filled with unstructured data which is essential to measuring quality, value and performance. NLP enables the passive mining and presentation of the gold in a Radiology Report.

no margin, no mission

Model the costs and operating plan for your Imaging Service Line based on 100% of Medicare rates only with no additional stipends. Solve your Imaging Service Line costs based on that and there will be profit left over to invest in the Imaging Service Line.

non-traditional vs traditional radiology group

Traditional Radiology Groups tend to be local in nature and owned by the Radiologists themselves with many partners and a few associates. Non Traditional Groups have a different ownership model and operating plans and tend to be owned by private equity players rather than the Radiologists themselves.



normalize up to an enterprise standard

You normalize different hospitals and their RIS data to each other based on something. That something is an enterprise standard that contains the additional attributes and fidelity needed to orchestrate study movement within an Imaging Service Line. A RIS system was built to run a department in a hospital. The inputs needed to connect 10+ different radiology departments to run as a single Imaging Service Line require an additional level of granularity and fidelity not found in traditional hospital RIS systems. The enterprise standard is included as part of our solutions.



not feel it

When efficient workflow enables Radiologists to consume more cases and not "feel it" at the end of their shift.



one click too many

Radiologists don't want to click through EMRs in order to get the information they need to perform their interpretation. A proper workflow anticipates, gathers and presents the information Radiologists are concerned about without additional clicks on their part. As an example, an Imaging Service Line doing 1,000,000 annual exams will waste 555 hours of Radiologists time annually if each study requires one additional click that takes 2 seconds each. That adds up to .3FTE (Full-Time Equivalent) time wasted annually.1

¹ The statements by Siemens' customers 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.

one keyboard, one mouse, one microphone

When your workflow orchestrator is able to connect all your hospitals and their disparate RIS/EMR/PACS/Speech Req onto a single PC for the Radiologist to eliminate swivel chair reading.



operating plan

The operating plan provides the "why" or strategy for an Imaging Service Line. It might also necessitate change management to take advantage of new found capacity created via efficiency. Many times people jump right to the "what" (the technology stack) when looking at creating an Imaging Service Line and fail to realize that the "why" drives the "what."

snapshot

A standard part of a Medicalis project where we take your RIS or billing data for all locations in your Imaging Service Line and normalize all of it to the Medicalis Enterprise Standard. This presents a "snapshot" of the current state so you can document and measure future improvements.



precursor tasks

All that happens from the moment a study is ordered until the images are available for a Radiologist to interpret. Productivity and efficiency for Radiologists occurs when you can organize, optimize, and orchestrate the precursor tasks.

predatory group

A Traditional or Non-Traditional Radiology Group that actively attempts to displace other radiology groups and take their PSA (professional services agreement).

PSA

Professional Services Agreement. This is the contract between a Radiology Group and their hospital and almost always includes exclusivity to the RVU's from that location.

radiologists tend to come as 1, not 1.3

A hospital that requires a Radiologists onsite M-F from 8am-5pm for 52 weeks a year will need 1.3 Radiologists to meet that Service Level Agreement, assuming the Radiologist takes 10 weeks vacation annually.¹

reverse the pipe

When a combined entity of GROUND and CLOUD is able to feed studies from the CLOUD down to the onsite Radiologists at a hospital to fill their worklist with sub specialty studies in accordance with the operating plan.



right study, right rad, right reason

Easier said than done. You need to contemplate more than exam level information from the PACS or RIS to make this possible. You need be aware of attributes of the exam, the Radiologist, the shift or slot the Radiologist is working, the operating plan goals of the Radiology group, and the SLAs for the Health System.

rip and replace

Another way of describing a predatory Radiology group and how they try to convince a hospital to rip out their current Radiology group and replace with them.

RVU to study ratio

RVUs are one of several different ways to account for differences between Diagnostic/Women's Imaging/and Interventional Radiology. An RVU to Study ratio that is lower than .9 probably has higher than 50% of the Imaging Service Line coming from X-Ray¹

same look and feel

It's no surprise that referring MDs would like their reports to look and feel the same irrespective of time of day or whether their study was read by the CLOUD or GROUND Radiologist.

school of fish that look like a whale

Any large health system that has numerous locations yet still has decentralized decision making that minimize their opportunities for economies of scale and skill. While they look like a whale, they actually swim like lots of individual fish.

shifts 1, 2, and 3

Workflow orchestration may need to change 3 times daily as the patient mix, modality mix, and sub specialty needs change throughout the day based on shifts and how many Radiologists are reading on each shift.

¹ JobShadow, Interview with a Radiologist, 2016 www.jobshadow.com/ interview-with-a-radiologist/#top

² The statements by Siemens' customers 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.

showing up flat

When an Imaging Service Line is providing finals 24x7 (including X-ray) there is no longer a need to over staff Radiologists in the morning because their CLOUD has been reading everything through the night or weekend. This allows you to start the morning with fewer Radiologists, stagger your shift start times for Radiologists, and provide more coverage later in the evening for the ED on second shift.

SLA

Service Level Agreement. Each hospital includes their SLA's expectations in their PSA between themselves and their Radiology provider. These tend to deal with things like onsite coverage requirements, reading within sub specialty, Turn Around Times, etc. Medicalis Workflow Orchestrator can manage a collection of different SLAs from different hospitals and normalize it all to enable a single workflow across all locations that benefits the Radiologists and the Health Systems alike.



slot variability

When there is a wide range of total RVUs consumed comparing different slots or shift on a given day. This is often caused by location specific issues for that slot and/or the Radiologist's specific and/or lack of transparency. This is not uncommon even in groups that share a common PACS worklist. This is symptomatic of poor workflow.



staff based on when the work is due, not when it arrives

Too often radiology groups determine staffing based on when studies arrive as opposed to when each study is due based on agreed upon SLAs. Medicalis Workflow Orchestrator is able to normalize SLAs from disparate systems and present a single worklist that favors sub specialty or local interpretation but never at the expense of SLAs.



staffing to the peak

While all Radiology providers have sub specialists, many determine staffing models based on the slots or shifts. Overstaffing the 2nd shift occurs just to deal with the 10pm-midnight chaos and they may then have too many or the wrong type of Radiologist for the rest of second shift. This is symptomatic of poor workflow.

sticky

Things that a Radiology Group can do to protect their contract from predatory Radiology Groups by providing services that their health system covet and would not want to lose.



stipends

Financial consideration given to Radiology providers from the health system to compensate for loss of professional revenue resulting from a hospital requirement or environment. Our internal term for when a health system provides the PACS, Speech Recognition and "helpers" to the radiology providers, is a "silent stipend."

sub-speciality reading requires sideways reading

Health Systems might need to reconsider onerous onsite Radiologists requirements if they want their studies read within sub specialty. If a Radiologist is onsite but is forced to only read studies from that location, they have to read it all at the expense of sub specialty.

swivel chair

The rapid consolidation of IDNs has forced too many providers into a swivel chair reading setup where Radiologists read out of the hospital provided PACS workstations and then all other studies need to be read on another PC. The Radiologists rolls their chair back and forth between the 2-3 workstations. Medicalis can eliminate the swivel chair setup and put everything onto a single PC and streamline workflow and is able to work with a variety of vieweres.



the next hospital

Always assume that your Imaging Service Line will be asked to incorporate another new hospital and that imaging will be one of the first service lines to go. Medicalis Workflow Orchestrator is setup to manage the "next hospital."

the why

The Operating Plan goals for the Health System and the Radiology Group with respect to the Imaging Service Line.

the three As

Our internal mantra: The "Three A's" for Radiologists in the Radiology Department Era were to be: Available, Able, and Affable. The "Three A's" for Radiologists in the Imaging Service Line Era are to be: Affordable, Aligned, and Accountable.



the three Os

Our internal mantra: "Organize" and automate Radiologist reading across sites, radiology practices, and legacy platforms. "Optimize" clinical use of imaging with service line performance information that measures quality, value, and performance. "Orchestrate" productivity, performance, and communication on a single integrated platform.



to do what, measured how?

Never lose sight of how the performance of your Imaging Service Line will be measured and justified as you make decisions.

variability and scalability

Scalability is often measured in terms of the cumulative volume run through a system, but issues of scalability are often caused by too many integrations to reach the cumulative volume. This is not uncommon in traditional worklist providers that don't focus on data governance and data normalization on the input side.

wobble event

External event that hits a local market hard enough to overcome status quo and force change. Examples include: Regional IDN announces plan to acquire a new hospital or merges with another health system; a Radiology Group loses one of their contracts to a predatory group; largest employer in town shifts their employees to health systems willing to partake in risk sharing arrangement to help them manage their healthcare costs.

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Medicalis Clinical Decision Support

What is Medicalis Clinical Decision Support?

The Medicalis Clinical Decision Support Mechanism (CDSM) enhances the quality of order entry within the EMR by improving indications capture and aligning strong evidence with local best practice. The Medicalis Clinical Decision Support Mechanism drives the "Right Order First Time", while reducing waste, delays in care, and improving physician-to-physician communication.

What is the challenge our customers face?

The current challenge for IDNs looking to meet the PAMA Mandate is selecting and implementing an approved Appropriate Use Criteria (AUC) based on their local standard of care. Often times we find IDNs deploying Appropriate Use Criteria (AUC) using a comprehensive approach, which prompts physicians on every potential order placed thus causing alert fatigue and provider disengagement.

What can our solution offer?

The Medicalis Clinical Decision Support Mechanism provides a proven, evidence- based targeted approach focusing on specific modality, indication and clinical area aligning with the Priority Clinical Areas (PCAs) for content delivery. Therefore, ensuring physicians are only engaged on cases where there is high potential for positive impact in return, increases quality and provides value.

What is the benefit to customers?

The Medicalis Clinical Decision Support Mechanism leverages AUC from a variety of sources which is delivered within the context of the physician's EMR workflow. Medicalis collaborates with our leading IDN partners in the Imaging Learning Network to author and deploy AUC based on evidence and local best practice to meet the PAMA 2020 Mandate.





Medicalis Referral Management

What is Medicalis Referral Management?

A portal solution for fast growing regional IDNs that want to optimize the use of their resources to increase market share and reduce leakage within the IDN network. The Medicalis Referral Management solution connects and manages operations across all service lines with personalized scheduling to meet patient needs thus delivering higher quality patient care across the IDN.

What is the challenge our customers face?

The current challenge for fast growing regional IDNs is leakage within their Network. Patients who are not informed of their provider choices and who don't have an easy way to schedule appointments are likely to seek services outside of the IDN. Referring providers and specialists also need enhanced communication capabilities with patients and peer-to-peer communication to improve the quality of patient care.

What can our solution offer?

The Medicalis Referral Management solution is complementary to the IDNs EMR(s) and can empower healthcare systems to promote their providers by connecting patients with the most optimal physicians within the IDN. The Medicalis Referral Management solution optimizes the use of high cost resources by publishing the slot availability throughout the IDNs referral community to drive higher quality outcomes for the patient and population.

What is the benefit to customers?

The Medicalis Referral Management solution enhances the quality of order entry and enterprise scheduling to personalize the delivery of care, to prevent leakage across IDN Service Lines and increase network market share.





Medicalis Workflow Orchestrator

What is Medicalis Workflow Orchestrator?

The Medicalis Workflow Orchestrator is an enterprise level solution, which organizes and optimizes radiologist reading across sites, radiology practices and legacy IT platforms. The Medicalis solution orchestrates productivity, performance and communication on a single, integrated platform to drive the Imaging Service Line for fast growing Regional IDNs and large Radiology Groups.

What is the challenge our customers face?

The current challenge for fast growing regional IDNs is the inability to connect all disparate locations, radiology providers, and legacy platforms, and to stop functioning as a collection of radiology departments. Today's radiologists are having to "swivel chair" between disparate PACS/IT systems, which negates the ability to load balance; based on criteria such sub-specialty, SLA, and operating plan goals.

What can our solution offer?

The solution provides a Workflow Orchestration layer for the radiologists, offering a single workflow across the IDN to increase Radiologist productivity and efficiency, while producing a single-integrated platform to reduce variation in care and improve the quality of patient care across the IDN Imaging Service Line.

What is the benefit to customers?

The Medicalis Workflow Orchestrator connects the disparate systems across the IDN to make all studies available from any location providing greater productivity and efficiency to radiologists. This enables the IDN to produce uniform service standards with reduced clinical variation so the Imaging Service Line is able to consume more volume without requiring additional resources.

Prerequisites include: Connection to clinical network, DICOM compliance, meeting of minimum hardware and software requirements, and adherence to local data security regulations.



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