Edison Open AI Orchestrator enables quick deployment of new applications, easy configuration of workflows and algorithm parameters, and provides the ability to easily experiment, measure, and optimize results.
Can productivity software actually create more work?

In a word, yes.

While many applications show promise to alleviate work and enable clinicians, they can actually cause even more work and frustration if they require additional training, time on the computer, and can’t work together in a cohesive manner.

It’s no surprise that numerous studies have reported that an increasing workload is one of the leading sources of job related stress leading to burnout.\(^1\)\(^-\)\(^5\)

In radiology, not only have workloads steadily increased over the last 20 years due to the increased utilization of imaging, they’re getting more complicated. This has led to 54% of radiologists reporting the feeling of being burned out or depressed.\(^6\)

And then there’s the added stress of additional computerization of practice.\(^6\) The irony here is that many technologies are designed to help productivity, they actually can be adding work. In fact, over half of institutions report being flat-out terrible at getting personnel to train and adopt.\(^7\) Thus, in attempting to alleviate radiologist burnout, adding more productivity tools may actually be adding to radiologist burnout level.

Productivity solutions should be implemented for the end result of actually alleviating work – not adding to it.
Open AI Orchestrator is part of GE Healthcare’s Edison family, and is designed to seamlessly integrate clinical applications into the radiology reading workflow.

It efficiently manages these applications along with their execution and dataflows by orchestrating the inter-operation with various imaging devices, data stores and other information technology systems.

By way of a visual workflow editor, it explicitly documents the implemented care process and required parameters of operation.

By using the PACS interface radiologists are currently familiar with, OAO processes data received by imaging devices to the PACS, sending it to the appropriate applications. It then gathers the outputs of those applications and sends it back to the appropriate corresponding PACS.

The solution: Edison™ Open AI Orchestrator.

- Efficiently manage and automate AI and non-AI enabled processes encompassing imaging workflows
- Easily manage rules governing use of AI applications, parameters of operation and other interoperability with external systems
- Coordinate and enable notification and alerting mechanisms for multiple personae
- Provide a way to instrument and subsequently learn and improve the workflow process
Let’s be honest. Learning new software can be tedious – and one of the top reasons for personnel frustration. At GE, we believe solutions should work with you, not against.

What is needed are ways to effectively orchestrate the application of assistive productivity-enhancing technologies in the radiology reading workflows in a way that reduces clicks and the number of UX interactions rather than adding to them. It also needs to reduce the requirement to learn and adapt reading habits to new workflows.

That’s why Edison OAO, while closely integrated with GE Healthcare’s Centricity™ PACS, Universal Viewer and vendor neutral archive, has also been designed to be vendor agnostic. Today it can support both GE Healthcare as well as third-party clinical applications.
How does Edison Open AI Orchestrator Work?

While it may seem instantaneous, OAO actually deploys a disciplined approach to providing you the best insights for your patients.

1. Image is acquired on imaging device.
2. DICOM study is sent to PACS.
3. PACS sends the DICOM study to Edison OAO.
4. Using rules incorporated into the defined workflows, Edison OAO identifies an image or image series generated by a scanner that correspond to one or more clinical applications designed for a specific anatomical body part, order indication, disease process or other specified criteria.
5. The orchestration system then routes the relevant images and other necessary data from a PACS or archive to these applicable clinical applications which may be hosted on-premises or in a private cloud.
6. The GE Healthcare or third-party clinical algorithm processes information, and sends status and AI findings back to Edison OAO.
7. Edison OAO sends the DICOM study with any AI findings and status back to PACS.
8. AI findings can be used to triage and prioritize exam worklists as well as provide decision support in the radiologists’ exam reviews.
The power and freedom clinicians need.

As powerful as these new AI-based tools are, they are not replacing the radiologist. They are providing support to enable radiologists and other clinicians to provide the right diagnosis for the right patient at the right time. As they operate in the workflows, they will still need to be monitored and adjusted by humans. Radiologists will be assessing and guiding the clinical relevancy effectiveness of these tools for the foreseeable future.

To assist in assessment and optimization by clinicians vs. IT personnel, Edison OAO provides comprehensive administration interfaces in addition to a visual workflow editor, facilitating easy management of multiple AI solutions from any number of vendors. That means personnel can understand and build trust with AI algorithms before committing to large scale deployment. It can also help reduce the complexity of multiple systems and algorithms working together that could lead to error and risk if implemented incorrectly.
Elevating radiology.

From...

See.
- Confusing workflow scripts that aren't easily viewed, understood, or edited.

Decide.
- Ambiguity over which clinical applications should be used in a given care scenario and priority.

Connect.
- Uncertainty over how to manage a growing number and diversity of clinical applications across the enterprise.

Inform.
- Questions over knowing how to prioritize exams at a given time, and how best to provide prompt and timely care.

To...

- Confidence using visual workflow editor – enabling logic to be explicit and easily edited. Also, documentation of the implemented care process and required parameters of operation.

- Clarity using clinical rules to identify type of image and determination of appropriate action – considering indication, disease process, or other criteria.

- Assurance with routing relevant images from PACS to appropriate clinical applications, hosted either on premises or private cloud.

- Knowledge is returned back to the imaging workflow which can be used to triage and prioritize exam worklists as well as alert care team members to provide timely decision support.
What is the Edison Platform?

Edison Open AI Orchestrator is part of GE Healthcare’s intelligence platform designed to help you achieve greater efficiency, improve patient outcomes and increase access to care.

Embedded within existing workflows, Edison applications can integrate and assimilate data from disparate sources, and apply analytics or advanced algorithms to generate clinical, operational and financial insights.

Edison solutions can be securely deployed via Cloud, Edison HealthLink, or directly onto smart devices.

Powerful AI backed by world-class service.

It’s no secret that there are numerous AI companies to choose from – and selecting a vendor for your AI needs requires significant consideration.

At GE Healthcare, we understand the fundamental importance of functionality. We also know you need to think about the future, and how your investment will be supported. This includes:

» Seamless integration with existing imaging equipment
» Optimization for existing Centricity™ PACS
» Compatibility with third-party vendors
» World-class service and support
» Rich history and company stability
» Ability to maximize existing GE Healthcare investments

In addition, GE Healthcare’s team of workflow and application specialists have decades of clinical and IT experience working with imaging organizations to ensure they maximize their investment in new applications. This is a comprehensive pre- and post-implementation engagement that encompasses not just automating current workflows, but also assisting customers to re-imagine their workflows in support of achieving their organizational KPIs.

The bottom line? GE Healthcare can provide the level of service you need to help you understand how to best utilize your AI capabilities.

We’ll even help you navigate a wide choice of AI based clinical applications to ensure your investment in AI results in optimized imaging workflows and improved care delivery.

And that’s the GE difference.
Imagine and Transform.

Today’s organizations must balance ongoing personnel and operational issues with a need to keep up with a growing number and complexity of exams.

To meet these challenges, Edison OAO and GE Healthcare’s professional services enable organizations to leverage AI-based clinical applications with proper tools and consultative guidance. This helps ensure seamless deployment of AI-based clinical algorithms and optimization of existing or re-imagined workflows to realize the potential of increased productivity and diagnostic confidence from these applications.

*Edison Open AI Orchestrator is designed to quickly and seamlessly integrate clinical applications into the radiology reading workflow, reducing clicks rather than adding to them.*

To learn more about how GE Healthcare can assist your organization in deploying AI-based applications for radiology, please contact your GE Healthcare representative, or call (866) 281-7545.
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.

Imagination at work

6 Medscape National Physician Burnout, Depression & Suicide Report 2019, Leslie Kane, MA, January 16, 2019