# Consolidated solution, infinite possibilities

Helping healthcare providers deliver
better outcomes at lower costs through
Enterprise Imaging IT solutions

SIEMENS
Healthineers

## About *syngo*.**via**

*syngo*.via* is an intelligent, integrated imaging software. It offers multi-modality reading and fast 3D results to speed up daily routine. It includes the latest innovations and AI-enabled features to take your reading to the next level.

*syngo*.via Flex Plan is a comprehensive, predictable business model. It enables healthcare providers to subscribe to *syngo*.via packages for clinically specialized to Enterprise-wide Advanced Visualization and routine reading solutions that simplifies long-term planning, subscriptions, and budgeting for large hospitals, hospital networks, and IDNs. It helps these organizations operate efficiently while improving health outcomes and addressing the growing needs of the communities they serve.

**The worry-free all-in solution includes:**

- The full range of *syngo*.via advanced visualization applications** are available to all users*** and easily expand along with growing institutions

- Simple subscription model – makes budgeting transparent and predictable

- Complete service, upgrade, and education plan – keeps both the system and users up-to-date

## Contents

# Executive summary

## Doing more with less through automated and standardized workflow

A large nationally recognized healthcare system was in a position other organizations might consider enviable: the population of the community it served was growing. On the other hand, the new era of healthcare was dawning, and the organization faced increased pressure to improve outcomes and efficiencies while remaining profitable. The combination of these factors drove increased demand for high-quality imaging, the need to expand through acquisitions, and the desire to deliver even more outstanding care to patients.

Meeting the growing needs of the community, however, was not proving to be an easy task. With a heterogeneous IT landscape, this provider juggled multiple service contracts from various manufacturers. Managing several software packages and protocols resulted in data silos and unwarranted variations, which proved costly and inefficient. Dealing with disparate, disconnected systems stood in the way of achieving their goals. The provider needed a single, effective solution.

*syngo*.via Flex Plan enables the provider to consolidate to an unlimited *syngo*.via* subscription across the enterprise transformed care delivery, resulted in significant cost savings, enabled the addition of new service lines, and helped optimize clinical outcomes.

## The following specific benefits were achieved:

- An immediate $12 million return on investment by consolidating to a subscription package

- Simplified process for implementing new service lines, giving the provider a competitive advantage and laying the groundwork for expansion

- Addition of a full-time education specialist increased efficiency and reduced education application and support costs

- Standardizing protocols resulted in more timely diagnosis, more consistent results, and less patient exposure to radiation

*You can use *syngo*.via as a standalone device or together with a variety of *syngo*.via-based software options, which are medical devices in their own right. *syngo*.via is not yet commercially available in all countries. Due to regulatory reasons, its future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further information.

**All applications might not be available in every country. Applications that require third-party licenses are optionally available and have to be purchased as add-ons.
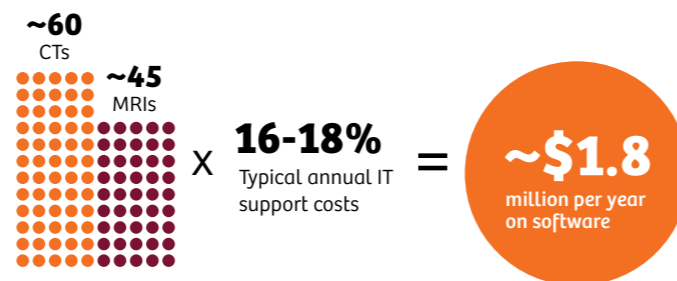
***All applications might not be available in every country.

# The provider

A Siemens Healthineers partner for more than four decades, this nationally and state-top-ranked hospital system *(U.S. News and World Report, 2017)* operates 14 sites in the central United States with five main campuses – a children's hospital, oncology center, outpatient health, proton therapy center, and an advanced center for outpatient medicine – as well as several community practices.

A major academic center and a nationally recognized center of excellence, this healthcare provider sought to continue to deliver best-in-class care to the growing community it serves. To support this long-term goal, the provider identified the need to invest in its infrastructure by modernizing one of its locations and expanding through strategic acquisitions.

Furthermore, as pressure to transition to value-based care increased, the provider evaluated its current operations. Management quickly realized the current infrastructure, consisting of roughly 60 CTs and 45 MRIs, would not enable the provider to thrive long term and risked negatively impacting patient care and profit margins. They looked to Siemens Healthineers, a long-time partner, to identify opportunities to streamline operations and seamlessly connect its systems across the current and future enterprise.



**~60** CTs

**~45** MRIs

X **16-18%** Typical annual IT support costs

= **~$1.8** million per year on software

Provider's previous annual software expenditure

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- Major academic center
- 1,800-member clinical staff
- $54 million equipment operating budget
- 154,000+ admissions and 563,000+ emergency room visits annually

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*"We're very much a data-driven organization. My dashboards for my clinical asset management business run all the time."*

–Director of Clinical Engineering

# The challenges

Embarking on an all-in* *syngo*.via Flex Plan solution meant a paradigm shift for this provider. It resulted in opportunities to realize innovation savings, streamline operations, and reduce unwarranted variations.

## Financial

A key challenge for this provider was the increased cost associated with a change in the modality business model, impacting a majority of its imaging equipment. Under the new model, the provider could no longer afford to invest and meet long-term goals. As management evaluated different options, they realized they maintained multiple service contracts – each with unique protocols and maintenance requirements. They identified the need to consolidate individual modality-specific advanced visualization software deployments across the enterprise for increased efficiency.

The annual software cost for individual modality-specific advanced visualization software deployments came to $100,000 per workstation. With nearly 60 CT and 45 MRI scanners, this represented a massive yearly expenditure of $10.5 million on software alone. In addition, the associated lifecycle costs were difficult to predict, making budgeting and planning challenging.

## Operational

Maintaining multiple decentralized advanced visualization systems also involved hidden costs, such as maintaining a 3D reconstruction lab with a dedicated staff and ongoing user education. Given the institution's size and volume, the operational cost of keeping staff trained and knowledgeable amounted to roughly

$2,500 per training course. Scheduling issues also contributed to revenue loss. It was also extremely inefficient from workflow and staffing perspectives: users did not "speak" a single universally understood "language." In addition, given the long lead time required to book educational specialists, the provider was not able to keep staff up-to-date on training or respond to technical questions and help requests in a timely manner.

This lack of standardization led to the duplication of efforts across the Enterprise. The heterogeneous IT system did not allow future technology to be incorporated.

Using imaging data from disparate systems added time and contributed to an "individual-centered" mentality; it hindered staff from collaborating and sharing clinical expertise.

## Clinical

The clinical use of multiple decentralized advanced visualization systems resulted in unwarranted variations between examinations and users. Non-standardized protocols were used on the various modalities, and thus, the data was not always comparable nor consolidated into a single repository. This led to inefficiencies and variability that could impact diagnoses and treatment.

*All applications might not be available in every country. Applications that require third-party licenses are optionally available and have to be purchased as add-ons.

# The solution



syngo.via* is the intelligent imaging software for multi-modality reading that helps you master growing amounts of imaging data in less time. Work with fewer clicks and more ease using a clear screen that is tailored to your style of reading. In short, syngo.via is reading as it should be.

*"I now no longer have to turn a patient away because I don't have the product to be able to provide the solution for their care. It doesn't cost me additional resources to start up a new service line. You have a great product, and you can provide great solutions and take great care of patients."*

–Director of Clinical Engineering

The provider needed an all-in, Enterprise-wide solution to digitalize healthcare. The syngo.via Flex Plan allows the staff to get unlimited access to data and information at any time and from anywhere, transforming care delivery while positioning the organization to meet the growing needs of the patients in the community it serves.

With syngo.via, data is automatically connected and aggregated directly from the provider's CT and MRI scanners. This removes data silos and enables interoperability across the care continuum. Clinicians and staff can now seamlessly access the data in one location and continue their work wherever they are – whether in another hospital, at home, or traveling. It also allows staff in different locations to easily collaborate, since they can easily review the same data in real time.

They also implemented several new workflow protocols such as Act on Stroke and Time is Brain. Act on Stroke combines diagnosis and treatment into a single efficient workflow that preserves precious patient "brain time." The provider's average stroke scan time is now 14 minutes – more than 10 minutes faster than the recommendation.[1] All facilities in this hospital system are now Level 1 stroke certified.

With operational challenges addressed, the provider identified opportunities to increase revenue, deliver better outcomes, and enhance patient satisfaction. Patient offerings were expanded to include heart valve replacement surgery and lung cancer screenings, both of which were needed to better serve patients and provide a competitive advantage for the system.

Implementing syngo.via Flex Plan drove incremental revenue and resulted in considerable cost savings system-wide. This also meant patients spent less time in the imaging lab.

With a single vendor solution in place, the provider has now laid the foundation for expanding digitally enabled healthcare solutions, including the upcoming implementation of teamplay. teamplay will further reduce long-term expenses, increase efficiencies, enhance the patient experience, and improve the work life of healthcare providers.
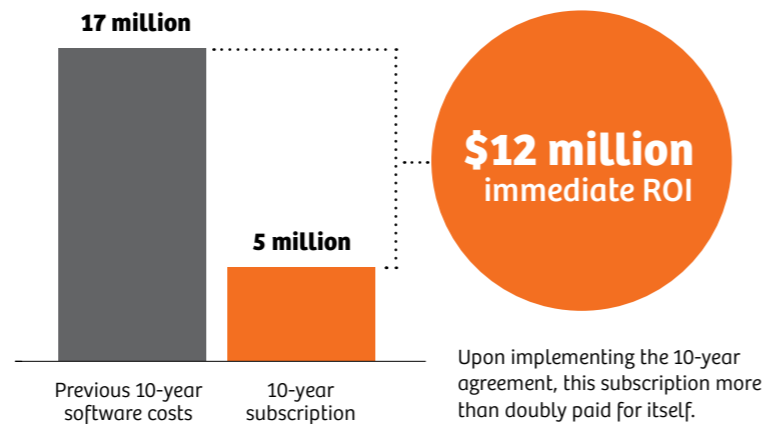
# The results

Almost immediately, implementing *syngo*.via Flex Plan generated tangible results and created new opportunities for this provider in all key areas.

## Financial

### Immediate return on investment

The results of previous hidden costs were now uncovered and eliminated, allowing some of the $54 million equipment operating budget to be redeployed to support innovation. Training costs of $2,500 per course were eliminated, which is impactful given the size and volume of the system.
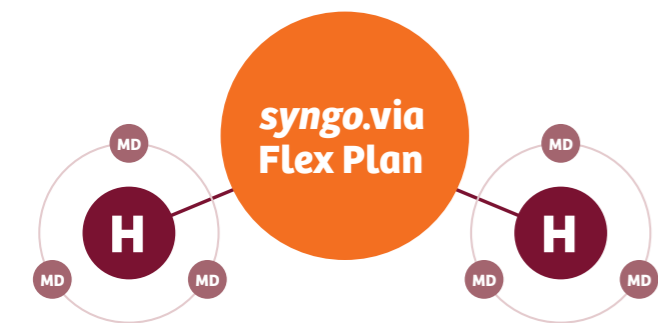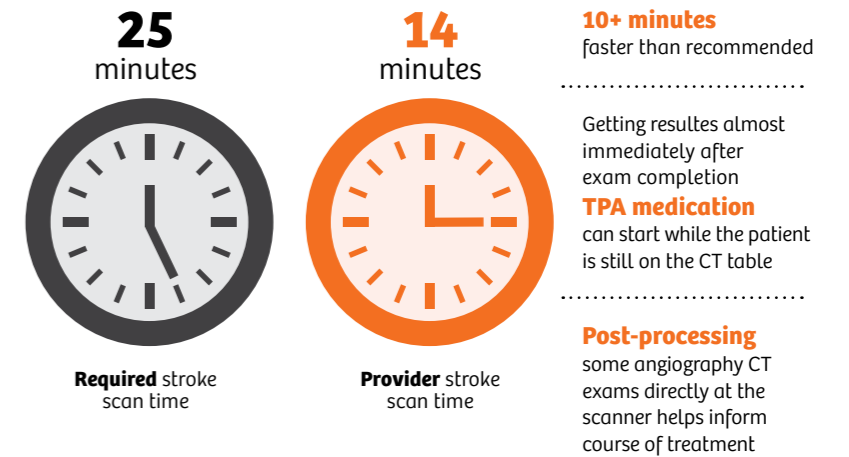
New service lines could now be quickly added at no additional cost, opening opportunities for immediate and future revenue enhancement. Savings of approximately $300,000 per unit were used, for example, to purchase 19 additional or replacement CTs.

**17 million**

**5 million**

**$12 million**
immediate ROI

Previous 10-year software costs

10-year subscription

Upon implementing the 10-year agreement, this subscription more than doubly paid for itself.

## Clinical

### Saving time, saving lives

By standardizing and optimizing workflows and protocols across a multi-hospital system, time for certain procedures such as stroke, is significantly less. In addition, implementing optimized workflows improves outcomes. Clinicians can now administer life-saving and brain-saving tPA directly on the scan table.
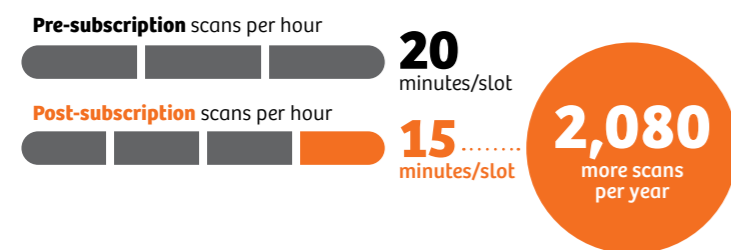
**25** minutes

**14** minutes

**Required** stroke scan time

**Provider** stroke scan time

**10+ minutes** faster than recommended

Getting resultes almost immediately after exam completion

**TPA medication** can start while the patient is still on the CT table

**Post-processing** some angiography CT exams directly at the scanner helps inform course of treatment

## Operational

*syngo*.via Flex Plan

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### Seamless, collaboration-friendly interface

Digitalizing and aggregating data means clinicians can now access information anytime, anywhere, enabling collaboration and simplifying care.

### Shorter scans, more scan slots, thanks to consolidated workstations

Additional slots are now available, enabling greater scan revenue and higher patient and employee satisfaction. This also enables more patients to be treated in a day.

**Pre-subscription** scans per hour

**20** minutes/slot

**Post-subscription** scans per hour

**15** minutes/slot

**2,080** more scans per year

*"We shouldn't have to customize everything that we do to provide great medicine. We should have modalities [and image-reading] software that do that for us, and we're seeing that today."*

**–Director of Clinical Engineering**

# Additional resources



## teamplay*

To advance digitalization in healthcare, teamplay is a departmental performance management solution that brings together healthcare professionals in a team effort.

By connecting medical institutions and their imaging devices, teamplay apps aspire to create the biggest radiology and cardiology team in the world and provide its members with tools to tackle big data and the challenges of increasing cost pressure.

**siemens.com/teamplay**



## Siemens Healthineers Digital Ecosystem**

Siemens Healthineers has built a wide presence in daily healthcare provision, with one of the largest sets of healthcare data. From this vantage point, we are now introducing the Digital Ecosystem, an open and secured environment.

Integrating and interconnecting data, participants, applications, and services are key goals of the Siemens Healthineers Digital Ecosystem. As a result, our Ecosystem will serve the wide spectrum of clinical, operational, and financial tasks and functions in healthcare delivery.

**siemens-healthineers.com/digital-ecosystem**

*Please check if teamplay is available in your country.

** Siemens Healthineers Digital Ecosystem is not commercially available in all countries. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

# Get your solution, expand your possibilites

Ask your Account Executive how you can maximize workflow and performance throughout your organization with solutions customized to help manage patients across the care continuum.

**Visit siemens.com/syngovia**

Siemens Healthineers enables healthcare providers worldwide to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, improving patient experience and digitalizing healthcare. A leader in medical technology, Siemens Healthineers is constantly innovating its portfolio of products and services in its core areas of diagnostic and therapeutic imaging and in laboratory diagnostics and molecular medicine. Siemens Healthineers is also actively developing its digital health services and enterprise services.

The statements by Siemens' Healthineers customers described herein are based on results that were achieved in the customer's unique setting.

Since there is no "typical" hospital or laboratory 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.

## Reference

1. NINDS: Stroke proceedings: acute care. National Institute of Neurological Disorders and Stroke, National Institutes of Health website https://stroke.nih.gov/resources/stroke_proceedings/recs-acute.htm. Updated June 19, 2008. Accessed November 15, 2017.