



## Agenda



- IntelliSpace Portal 11 overview
- Competitive analysis
- Brief summary of launch at ECR

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- Competitive analysis
- Brief summary of launch at ECR

## Changes in healthcare create challenges in imaging How will you respond?





One integrated advanced visualization platform



# IntelliSpace Portal The solution pillars

## IntelliSpace Portal

PHILIPS

All your advanced analysis needs, one comprehensive solution



## Intelligent

Designed to support diagnostic confidence

Comprehensive set of clinical applications addressing your clinical needs, on an constantly-updated platform.



### Connected

Access your data when needed

From scan acquisition to advanced analysis, Philips offers a full suite of solutions and services for your radiology workflow across enterprise and beyond.



### Secure

Designed to support data privacy across your enterprise

Secure access to the imaging data and tools you need for your routine work. Single vendor and service contracts for simplicity.



# Multiple advanced tools, one standard for diagnosis



Clinicians have access to more data than ever, but too little time!
With consistent workflows across applications, IntelliSpace Portal is designed to support you to optimize performance and drive productivity.



#### A rich portfolio of clinical depth

• A comprehensive set of over 70 clinical applications in multiple clinical domains



#### Adaptive Intelligence for decision support

- Using Adaptive Intelligence for increasing diagnostic confidence and facilitating decision support.
- Predict usage patterns
- Intelligent prior exams identification



#### Continuous improvement

 A steady heartbeat of new functionalities and enhancements to keep you updated with the latest innovation



# Seamless integration across your hospital network



As a server-based, single license-managed solution, IntelliSpace Portal is easy to use, manage, and upgrade. Everyone works with the same software version, and all applications and licenses are handled in one solution. Integration with hospital systems such as PACS, RIS, and EMR helps keep information flowing\*.



<sup>\*</sup> Please contact your local Philips representative for details on multi-vendor coverage.

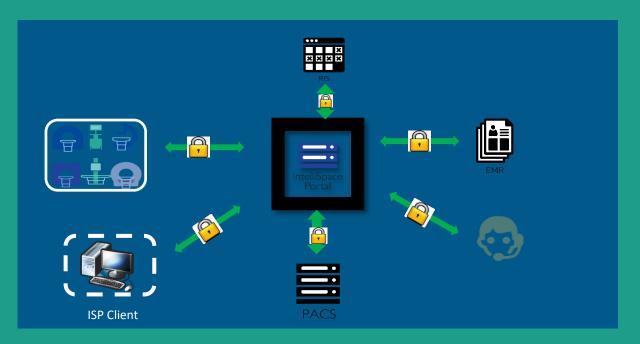


## A simple and secure solution



We are dedicated to helping you maintain the confidentiality, integrity, and availability of personal data, business data and the Philips hardware and software products that create and manage this data.

IntelliSpace Portal provides application level security, including authentication, session management, user-defined password management, access control at user and role levels, auditing, and data integrity checks





## Service agreements Turn change into an advantage, your advantage





Software and off the shelf hardware upgrades, with enhancements to existing applications, and easy access to new applications including installation services



Drive clinical and operational excellence



Tailored technical /clinical /business consulting services for your needs



Continually expand the performance of your Advanced Visualization solution



Training courses (clinical and administrative)



Clinical and technical support (remote and on-site)



# IntelliSpace Portal 11 The solution pillars

## IntelliSpace Portal 11







## Intelligent

Focusing on workflow efficiency

- Focusing on workflow enhancements of main clinical applications for improving the efficiency of your daily work.
- New integrated Mirada NM viewer which is designed to support your clinical challenges and optimize your workflow.



Bringing locations and people together

- Access anywhere to your images via new web-based viewer across the enterprise and beyond\*, collaborate and share results with your peers in real time.
- Redefine advanced visualization scalability from a single workstation towards enterprise solution up to 200 concurrent users.



## Secure



- Flexible privacy settings to prevent unauthorized access to patient data.
- Enhancing system security by automatic detection and update of Microsoft security patches.
- Continuing excellence in serviceability and remote monitoring







## Intelligent

### We are focused on **supporting workflow efficiency**



#### New



Mirada NM Viewer

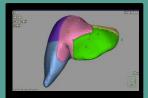
Enhanced user experience for NM reading

#### Enhanced



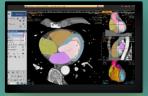
MR Cardiac Functional

Simplifying RV segmentation with harmonized LV workflow

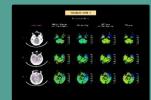


MR Liver Health

Multi-parametric liver assessment with volumetric quantification



CT Comprehensive Cardiac Analysis Enhanced chamber and lumen segmentation



CT Brain Perfusion\*

Perfusion and summary maps automatically available on PACS



MM Advanced Vessel Analysis Customizable volume

rendering smoothness



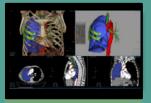
CT Spectral Viewer

Spectral volume quantification for sub-lesion analysis.
Automatic KeV windowing



CT Calcium Scoring

MESA based risk score



3D Modeling\*\*

3D Model based on fused CT and MR studies

<sup>\* 510</sup>k pending

<sup>\*\*</sup> In USA 3D models are not intended for diagnostic use



## Connected

## PHILIPS

## Making the connection between peers and hospitals

#### New





Access anywhere to Advanced visualization data- During multi disciplinary meeting or outside the hospital



**Brings innovation to Clinical collaboration**Consult and share your findings online, with real time Peer2Peer sharing capabilities



**Flexible Scalability** - From a single department towards Enterprise solution up to 50 concurrent users

#### **Enhanced**

IntelliSpace Enterprise Scalability engine



**Flexible Scalability** - Enterprise solution enables easy maintenance and scale up to up to 200 concurrent users



**Performance – E**xtra processing power to accommodate for resource consuming applications



**User Experience** –Single patient directory with an overview of all ISP cases across Enterprise



**Deployment and Service -** fast deployment and Proactive monitoring of HW & SW components

<sup>\*</sup> Zero footprint is not intended for diagnostic review, accessible from anywhere within hospital network OS X 10.10 and Windows 7,10. Internet Explorer, Chrome, Edge, Safa

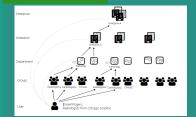


## Secure



## Keeping your patient data protected acrosss the hospital network

#### New



Data segregation

Flexible data segregation mechanism which prevents unauthorized access to patient data

#### **Enhanced**



Microsoft security updates automation

Automatic detection and update of Microsoft security patches



**Proactive Monitoring** 

Enhanced Proactive monitoring designed to increase system uptime and reduce maintenance

## ISP11 Timeline (Tentative)



- RfT Feb 2019
- RfA & catalog availability
  - International: Feb 2019
  - NA: May 2019
- RfD (LD) Q2 2019
- RC (VD) Q4 2019





## Intelligent

Designed to increase diagnosis confidence

## Mirada NM Viewer

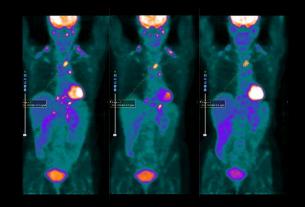
Enhanced user experience for NM reading with a leading NM viewing solution

- Mirada Viewer is a comprehensive NM solution used already by more than 700 sites across the world
- Designed to support your clinical challenges and productivity when viewing PET\CT, SPECT, SPECT\CT and Planar images
- Optimized workflow for handling multiple studies and quantifying findings

#### **Key Features:**

- Quick and configurable protocols for efficient reading
- Lesion tracking and treatment response
- Exportable tables and graphs
- PET\CT and PET\CT\MR registration
- Vendor neutral solution(1)





## Mirada NM Viewer

Enhanced user experience for NM reading with a leading NM viewing solution

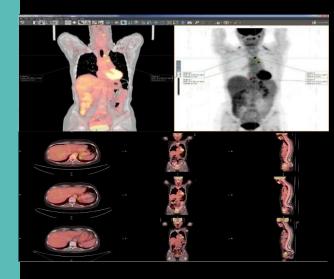
#### Mirada NM viewer packages:

- Mirada viewer SPECT tailored for SPECT viewing (available only as part of Mirada SPECT View/NM processing package for workstations LX)
- Mirada viewer Pro PET/CT, SPECT & SPECT/CT, and Planar viewing, including multi time point follow up
- **Mirada viewer Premium** PEC/CT/MR registration, 4D multi time point, and response criteria

#### Mirada NM viewer customized scalability:

- Workstation
- IntelliSpace Portal single concurrent user license
- IntelliSpace Portal multiple concurrent users, limited by system concurrency setting ("Site licence")





## MR Liver Health

Simplify workflow wit, automated calculation of whole liver volume

#### **Enhancements**

- A dedicated workflow to support the assessment of liver diseases based on MRI biomarkers such as Fat Fraction (FF) or T2\*/R2\* calculated for the whole liver and its segments
  - Numerical and graphical results
  - Longitudinal assessment of MR parametric maps
  - Results for the whole liver, liver segments and user-defined Regions-of-Interest (ROIs)
- Supports surgery pre-planning by providing 3D visualization and parametric quantification of the whole liver, its segments and userdefined ROIs.





## 3D Modeling

Bringing innovation into patient care

#### **Supporting Anatomical Understanding**

3D Modeling is used across a variety of clinical specialties.

It provides the physicians additional view and strengthening anatomical knowledge while reviewing complex, multi-disciplinary cases.

#### **Clinical training**

3D models play significant role in teaching basic and clinical medicine. This simulation-based educational approach can create a novel opportunity to stimulate interests in different fields.

#### **Patient Education**

3D models are utilized by clinicians to improve patient and family understanding of anatomy and pathology.

Explaining therapeutic approaches and techniques by visualization can empower the patient and can contribute to the overall patient experience.





## 3D Modeling

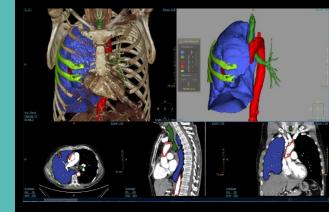
Streamlined modeling workflow optimized for 3D printing

- Offers a suite of clinically focused rendering and editing tools to optimize a model for printing, and allow reflection of the true patient anatomy
- Supports importing of 3D segmentations from other IntelliSpace Portal applications or creating your own custom models directly from DICOM images
- The output files of 3D modeling can be printed by a 3D printer and be used as a replica of an anatomical structure for simulation and preparation for clinical procedures \*

#### **Enhancements**

- CT & MR studies can be fused to create a single 3D model with-the help of alignment tools
- Import mesh files and display them as overlay contours on the DICOM image, for comparison of the printed model vs. DICOM image





## CT Brain Perfusion\*

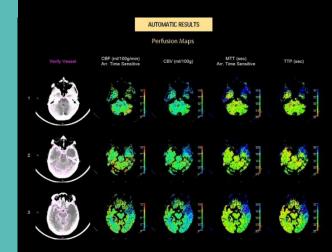
Identify hypo perfused areas in acute stroke

- Calculates and displays quantitative color perfusion maps of cerebral blood flow (CBF), cerebral blood volume (CBV), mean transit time (MTT) and time-to-peak (TTP)
- Provides quantitative summary maps which may assist physicians in determining areas of reduced cerebral blood flow.

#### **Enhancements**

• Perfusion results are automatically generated and sent to the PACS in convenient review format.





## CT Spectral Viewer

Optimized for analysis of spectral data sets from the IQon Spectral CT Scanner\*

- Enhancement of conventional image by an iodine map overlay
- Visualization of virtual non-contrast images
- Displaying images at different energy levels (40-200 keV)
- Lesion characterization using scatter plots
- Tissue characterization using attenuation curves
- Switching to spectral results through a viewport control

#### **Enhancements**

- Automatically adaptive Windowing for different keV levels
- Spectral volume quantification for quick sub-lesion segmentation, quantification, and visualization of hypo-perfusion regions
- Anatomy aware presets- hanging protocol like workflow, tailored for the viewed anatomy and user's preferences.

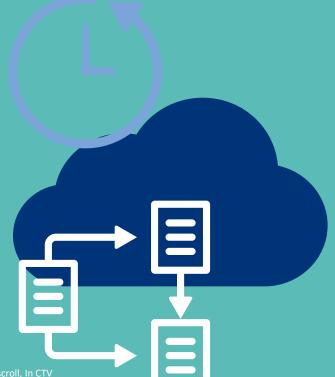


<sup>\*</sup>IQon CT reconstruction provides a single DICOM entity containing sufficient information for retrospective analysis - Spectral Base Image (SBI). SBI contains all the spectrum of spectral results with no need for additional reconstruction or post-processing. Spectral applications are creating different spectral results from SBI.

### Performance

Reducing time to results (1)

- Interactive scroll performance improvement
  - Longitudinal analysis layouts in CT apps<sup>(2)</sup> scroll up to 4 time faster FPS<sup>(3)</sup>
  - MMTT for multi-dimensional data up to 10% faster FPS<sup>(3)</sup>
- Reduced time to first image:
  - Spectral magic glass on PACS (sMGOP) faster in ~ 5 sec<sup>(4)</sup>
  - Spectral CT Viewer (sCTV)- faster in ~ 4 sec<sup>(5)</sup>
  - CCA up to 20% faster



- (1) Compered to ISP10
- (2) Tested on 2 x 3MP Barco monitor, With Barco Graphics Card, 4 time-points CT series, Slab view with reference images, Linked scroll, In CTV and MMTT applications.
- (2) FPS- frames per second.
- (3) Tested on a study contained 5 SBI series and 5 non-SBI series (overall 10 series), 600 images each (in workflow not containing series selector)
- (4) When loading an SBI (V3.4 or higher) with 600 images, time to switch to MonoE, MonoE Equiv., VNC, Iodine no Water, Z-Eff, Iodine Density, CES data types is estimated to be equal or less than 4 seconds





## Connected

Access your data when needed



## IntelliSpace Portal Scalability Engine

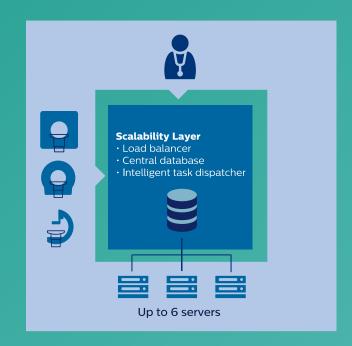


Redefining Enterprise Advanced visualization scalability without compromise

- From a single advanced visualization workstation towards Enterprise solution up to 200 concurrent users
- Complete server virtualized solution, VM-ware or Hyper V, deployed in on premise infrastructure of hospital or infrastructure provided by Philips

#### **Enhanced:**

- **Performance** extra processing power to accommodate for resource consuming applications for heavy users
- User Experience consistent user experience from a single workstation towards Enterprise solution. Single patient directory with an overview of all advanced visualization cases across Enterprise
- Deployment fast deployment on site via virtualization technology
- **Service** proactive monitoring of critical hardware and software components to reduce system failure





## Zero Footprint Viewer



Access anywhere to Advanced DICOM viewer across the enterprise and beyond\*

### Access anywhere\* to Advanced visualization data



Advanced viewing at point of care, during multi disciplinary meeting or outside the hospital at reduced infrastructure costs:

- MIP, MPR, slab views, 3D segmentation
- Fast comparison between prior studies or between series within study
- Automatic registration between studies

### **Brings innovation to Clinical collaboration**



Consult and share your findings online, anywhere\*, with real time Peer2Peer capabilities

### Flexible Scalability; seamless deployment



Tailored solution easily scaling from a single department towards Enterprise solution of up to 50 concurrent users





## Secure

Safeguard patient privacy across your enterprise

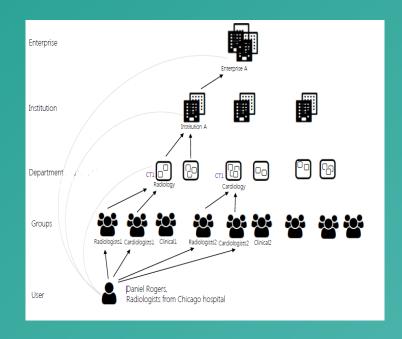


## Data segregation



Patient and role-based access controls to protect sensitive patient data from unauthorized access

- Flexible settings to prevent unauthorized access of patient data in clinical environment
- Data segregation mechanism to assign exams based on AE (Application Entity) Title and DICOM tags
- Patient & Role Based access controls
  - Role based privacy- what a user may or may not do with study data
  - Patient based privacy- whether or not a user may access a particular patient's study data



## Microsoft Security Updates Automation

Maintains your system security up to date



- Automatic security updates management solution for IntelliSpace Portal value added service as part of RightFit service offering
  - Improved application security and availability by keeping Windows OS up-to-date and aligned with security standards.
  - Automatic detection of missing security patches and their deployment
  - Periodic security reports and updates on the patch deployment status



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#### **Global AV market trends**



#### Platforms vs Tools

- Changing provider needs increases focus on interoperability and integration.
- Hospitals seek to reduce their supplier list.
- Large vendors aim to offer integrated platform and partner with AV Tools companies to increase capabilities.

#### Machine Learning

- Focus on Machine Learning to increase speed and accuracy of diagnosis.
- Will create a next generation of automatic segmentation and measurement tools for AV.
- Pre-analysis and second read technologies to focus AV on complex cases.

- Healthcare providers wish to combine medical imaging across departments and sites.
- Deals for standalone PACS decreasing in mature markets. VNA increasing.
- Enterprise Imaging creates opportunities for UV primarily for clinical review across sites.

#### More convergence between UV and broader imaging IT expected.

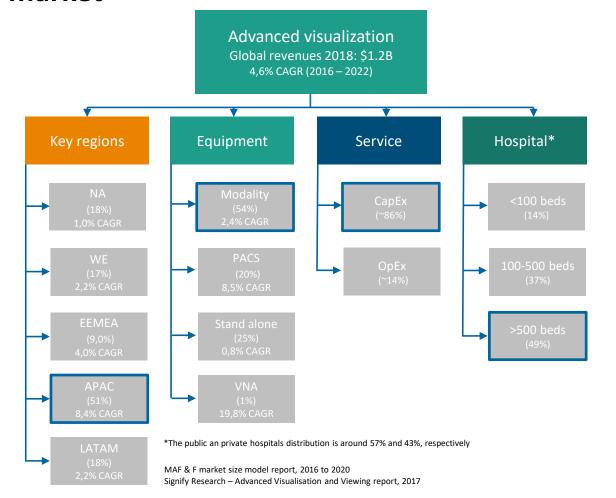
- UV vendors increasing clinical capabilities of their viewers to be able to meet diagnostic viewing requirements.
- Increased focus on workflow for complete EI solution either inhouse of through partnerships.

Enterprise Imaging

UV Capability Increasing

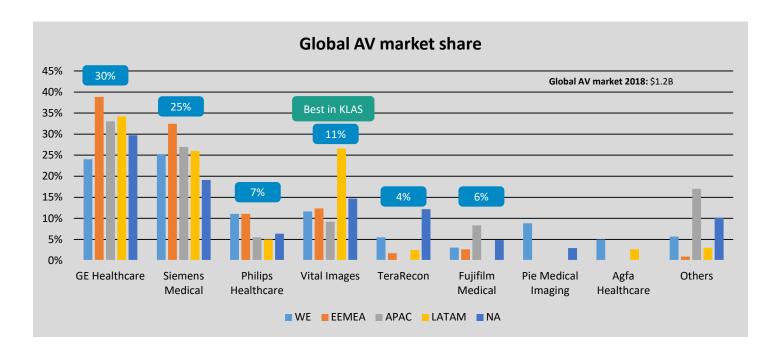
### **Global AV market**





## **AV** competitors landscape





## A single, integrated solution that grows as you grow





# 1. Intelligent

Designed to support diagnostics confidence





	Philips	TeraRecon	Siemens	GE	Vital/Canon	
Attribute	IntelliSpace Portal	iNtuition	Syngo.via	AW Server 2	Vital Vitrea	Smaller players
NM Viewing and Processing	++ New Mirada NM viewer	+	+++	++	+	MIM ++ Hermes + Mirada ++
MR Cardiac Functional	++	++	++	Arterys	Medis	Arterys +++ Circle +++ Medis ++
CT CCA	++	++	++	++	++	Medis +++
CT Calcium Scoring	++	++	++	++	++	n.a

Potential activities to achieve or sustain competitive advantage
* One solution for full Nuclear Medicine workflow (including MR CT, PET registration, follow-up and response criteria)  * Flexible for scaling up with one price for multiple users
* ISP offers a comprehensive portfolio of MR Cardiac capabilities to answer large variety of clinical questions both for clinical routine and research purposes * GE, Siemens, and Vital are offering the small player's solutions (Circle, Arterys, Medis)
* ISP is perceived as a robust and user-friendly in comparison to other solutions * Overall, similar functionalities to CCA are also offered by other vendors
* ISP Ca Scoring now offers the MESA database normal values, which is a relative advantage vs. other players

\* Stronger offer for the Atherosclerosis

Note: + for weak and +++ strong





	Philips	TeraRecon	Siemens	GE	Vital/Canon	
Attribute	IntelliSpace Portal	iNtuition	Syngo.via	AW Server 2	Vital Vitrea	Smaller players
MM AVA	++	+++	++	++	+++	n.a
MR Liver Health	++	n.a	+++	++	+	n.a
CT Brain Perfusion	++	+	++	++	++	Rapid +++ Olea +++
3D Modeling	+++	++	Collaboration with Materialise	++	++	Materialise / Mimics ++

Potential activities to achieve or sustain competitive advantage
* ISP is a real multi modality vascular solution * ISP's AVA doesn't require 2 CT scans (w/wo contrast) in order to perform bone removal (required by some of vendors)
* MR Liver in ISP11 now supports the assessment of fatty liver disease by analyzing liver segments and conveniently features longitudinal comparison between time points
* With its unique "traffic lights" quality indicator, ISP11 can now send brain perfusion results automatically to PACS, therefore closing gaps with niche players
* ISP offers a dedicated 3D modeling application with a unique CT-MR registration

Note: + for weak and +++ strong

## 2. Connected

Access data when needed





	Philips	TeraRecon	Siemens	GE	Vital/Canon
Attribute	IntelliSpace Portal	iNtuition	Syngo.via	AW Server 2	Vital Vitrea
Vendor neutral	Υ	Υ	Y	Υ	Y
Concurrent users	1 up to 200	Unlimited	5 to 15 per server XL	8.000 to 30.000 images	Unlimited
Public cloud	N	N	N	N	N
Artificial Intelligence	Preprocessing algorithm for CT and MR	Anatomic contours, mark updated findings and reports	Deep learning algorithms, detect and segment related structures	Ongoing collaboration with UCSF and Boston Children's hospital	Doesn't promote Al functionalities
Universal viewer	N	N	N	N	N
Zero footprint viewer	Y	Y	Y	Υ	Y
Cinematic rendering	N	N	Y	Υ	N
3D Modeling	Y	Y	Y	Y	Y

### Potential activities to achieve or sustain competitive advantage

- \* Creation of promotion material around interoperability
- \* Sales pitch around multi-modality and multi-vendor features
- \* Comprehensive set of business models tailored to the user
- \* Offer consultancy services from our team of experts
- \* Focus on patient data privacy and security
- \* VPC to evaluate the market potential is in place
- \* Webinar session to explain the AI concept and HI strategy
- \* A pilot study will occur in 2019 to collect proof point
- \* Al campaign will follow in 2019
- \* Focus on the new zero footprint viewer capabilities to promote access to imaging data and Peer2Peer collaboration
- \* Commercial campaign targeting referral physicians (white paper, brochure, etc.)
- \* Volume rendering (VR) is still today's standard and further research is required for determining the possible advantages of cinematic rendering over VR
- \* Social media campaign
- \* Commercial white paper with proof points

Note: The information assessment was based partially on the message displayed in the companies webpages

### 3. Secure

Support data privacy across your network





	Philips	TeraRecon	Siemens	GE	Vital/Canon
Attribute	IntelliSpace Portal	iNtuition	Syngo.via	AW Server 2	Vital Vitrea
		Support s	services		
Remote support	Philips remote support available in all packages	Web-based live chat and remote end-user support	Phone application support in all packages	inSite Remote diagnostics: online problem evaluation and if possible remote repair	Remote access by the customer support team
24/7 customer support	Only on Protection&Uptime and may differ from regions	24/7 emergency service line	24/7 emergency service line	Only available in the Support package	24/7 emergency service line for an additional fee
Onsite assistance	Optional in all packages	Onsite assistance for major issues	Optional and not in all packages	Optional in the a la carte services	Optional and free in bundle deals
		Software	services		
Remote installations	SW updates in all packages and SW upgrades in Protection&Uptime	Installation and upgrades done remotely. Channels are involved	Upgrade details by the regional center, onsite installation by regions	Digital tools for 24/7 remote access	Available and managed by the customer service team
Proactive monitoring	Only on Protection&Uptime	n.a	Siemens Remote Services	Predictive care with InSite	Customer success manager team
Virus protection	McAfee as standards, others Norton, Trend	n.a	Program Guardian Virus	McAfee as standards, others Norton, Trend	SW security updates

### Potential activities to achieve or sustain competitive advantage

#### Support services

- \* Remote support avoid local technical assistance, promote faster resolution of bugs, questions, and efficiency
- \* Understand he customer need for this support, when and how the AV solution sis used across the network
- \* Leverage on the local support
- \* One of Philips ICAP key differentiators
- \* Promote excellent onsite support during and after installation

#### Software services

- \* Promote the convenience of having a virtual deployment of the solution updates and upgrades
- \* Position proactive monitoring as a way to grantees that the system is always available reducing the need for onsite assistance and extra costs
- \* Automated Microsoft virus protection update. Additional service now included in the package for the customer convenience



<b>PHILIPS</b>
4

	Philips	TeraRecon	Siemens	GE	Vital/Canon
Attribute	IntelliSpace Portal	iNtuition	Syngo.via	AW Server 2	Vital Vitrea
		Education	services		
Clinical and IT training	Optional, KnowledgeScape, remote and onsite clinical and IT training	In-person training (3 days), onsite training (1-3 days)	Clinical and IT training as an option remotely or onsite	Available in all packages	Vita U, offers classroom education and onsite for a fee
Education tools	KnowledgeScape in all packages (only in English)	Free online clinical webinars (multiple languages)	Syngo.via community and online education services	Education webinars, remote instructor	Vital-U webinars, Vital-U eLearnings
		Business	services		
Reporting and analytics	Optional, management report and health check services		Optional, provided by service management reports		Optional, provided by service management reports
Customer support portal	Customer services portal	Customer support team (IT/clinical)	Lifenet customer portal, planning, monitoring, and service	Online portal for service and support	Customer success manager
Consulting services	IT and clinical services are optional in all packages	Project discovery, planning, pre- training, go-live, etc.	Optional, assets planning, evolve program, efficiency	Workflow, legal, technical, productivity	Solution deployment and integration

#### Potential activities to achieve or sustain competitive advantage

#### **Education services**

- \* Team of experts that provide the support and knowledge that is required to have a smooth implementation of the solution into the user workflow
- \* It should be standard and not optional
- \* Planning new clinical activities to support the sale process such as clinical webinars, literature, white papers

#### **Business services**

- \* The better the customer understand the solution performance the easiest is for Philips to position new ways of overcoming the identified gaps
- \* Good customer support is crucial for maintaining the customer in the loyalty loop.
- \* Provide feedback about the performance for improvement
- \* Tailored support accordingly to the customer needs and environment. Position the option as added value for both sides (efficiency and alignment)

Better than Philips



Check now...

https://www.ispsalestools.philips.com/competitive-info/Competitors

# Agenda



- IntelliSpace Portal 11 overview
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### IntelliSpace Portal 11 - Launch



### Release for Acquisition at ECR

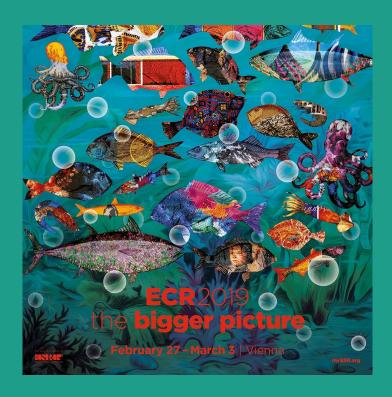
### More information to come pre-ECR

**NPI** webinars – February

Booth training for Clinical Demonstrators at ECR – February RfLD Clinical Training for Markets – Targeting April

### ECR 2019

Managed by M2O, BIU
Demonstrators from DACH, CEE, France
3D Modeling Speed Contest
3D Printer
3D models



# ECR 2019 – Speed Contest RFA at ECR

PHILIPS

- 3D Printing was our most active area of the booth in 2018.
  - To build on this momentum, we are taking it up a notch in 2019!
- Customers will be timed as they segment a vertebrae of the spine
  - The fastest customers of each day will win a prize
  - Each participant will receive a certificate with a printed polaroid as a "memento" from ECR 2019
- Planning / process
  - How to participate all booth traffic allowed, brief training first
  - Certificate Polaroid camera, time, name (Portal memory)
  - Winner prizes 3D Printed Spine (small version)
  - Social post best times to Philips Twitter? Quick videos?
  - Videos above workstation to introduce 3D printing case

- •"I want to try!"
- •Training on example case
- Open test case
- •Ready go (start timer)
- Perform 3D segmentation
- Stop timer
- Record time, compare with others
- •Print polaroid, take certificate
- Hand over to ICAP demonstration, 3D printing discussion, or keep on Philips booth





