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DIAGNOSTIC IMAGING IT

SIMPLICITY MEETS INNOVATION – BUNDLED AI POWER WITHIN YOUR DAILY ROUTINE

UNLOCKING POWERFUL AI SYNERGY

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DeepUnity AI Cube

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EFFORTLESS AI MANAGEMENT

In the dynamic realm of modern healthcare, AI solutions have emerged as indispensable allies to healthcare professionals. However, the vast landscape of Radiology is brimming with countless AI solutions. How can you effortlessly navigate this sea of innovation and ensure you're always ahead?

At Dedalus we don't just settle for the norm. We're your unwavering partner, committed to offering solutions that transcend the ordinary.

We are opening a gateway to a future where simplicity meets innovation - by developing a new solution that is not just a tool, but your steadfast ally in the intricate world of diagnostics. It's more than technology; it's a bridge to a validated network of AI partners that will revolutionize diagnostic reading.

DeepUnity AI Cube is a testament to simplicity – the simplicity of powerful technology made accessible to you, the simplicity of unraveling complex diagnoses, and the simplicity of offering the best patient care with ease.
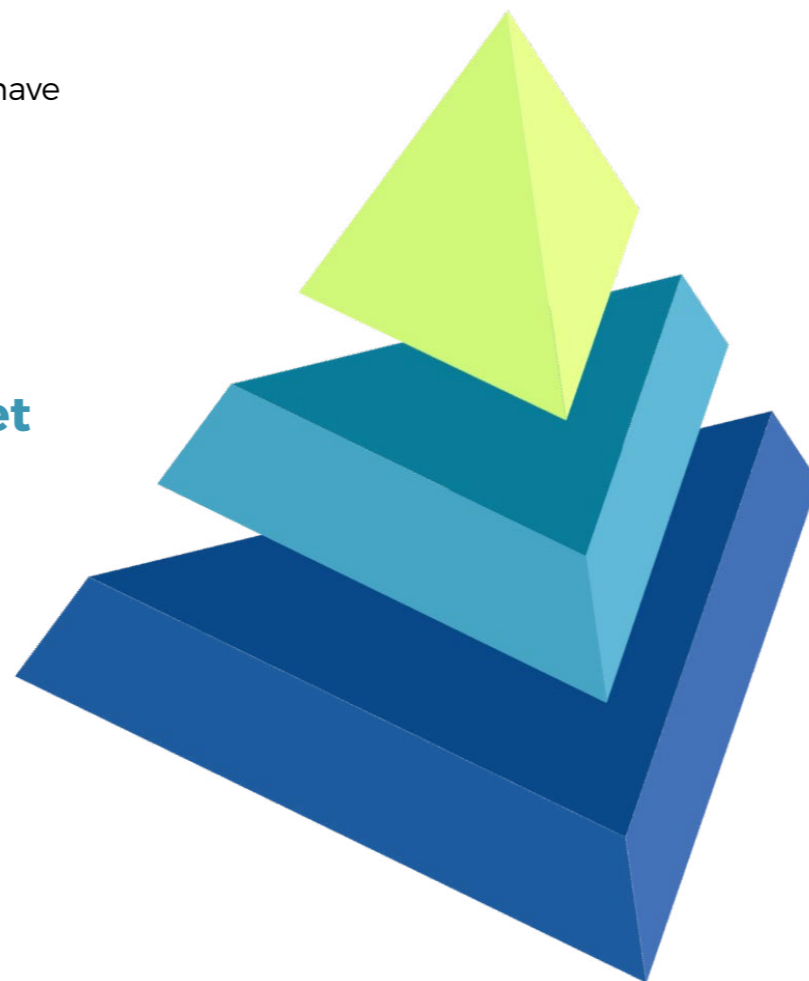
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FACING CHALLENGES

With the rise of AI solutions different challenges have
 come up:

Validate AI partners

While there are many AI solutions on the
market, a validation of the desired solutions
need to be performed, which can be time
consuming

Many AI solutions on the market

There are a lot of different AI vendors but
the budget for new solutions is limited

Interrupted workflow

AI solutions have their separate
interface & needs to be opened
separately

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DEEPUNITY AI CUBE - YOUR PARTNER, YOUR GUIDE, AND YOUR INNOVATOR

Validate AI partners

Before letting an AI solution be part of our network we validate the solution upfront, so you don't have to do this

Access to different solutions with less costs

DeepUnity AI Cube establishes a framework; allowing a simple integration of AI solutions from our partner network and **reducing** the implementation **costs** by far
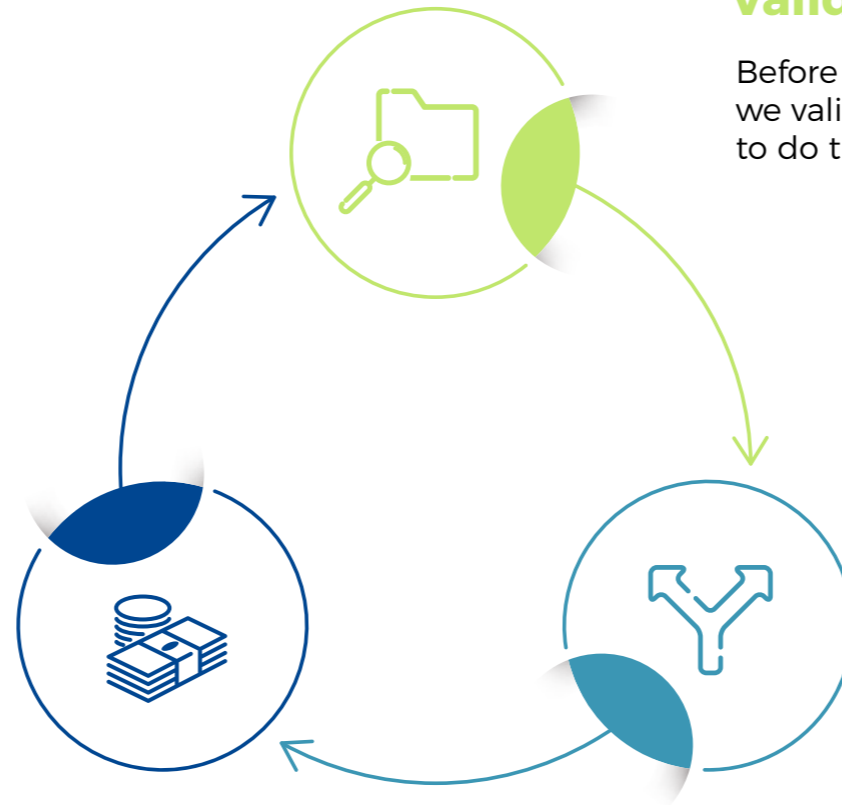
Smooth workflow

Connection to AI partners and the transmission of AI results is a seamless part of the diagnostic workflow

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INTRODUCING THE POWER OF SIMPLICITY

DeepUnity AI Cube is a cloud-native integration solution that streamlines the diagnostic workflow and enhances diagnostic accuracy by seamlessly connecting AI solutions.
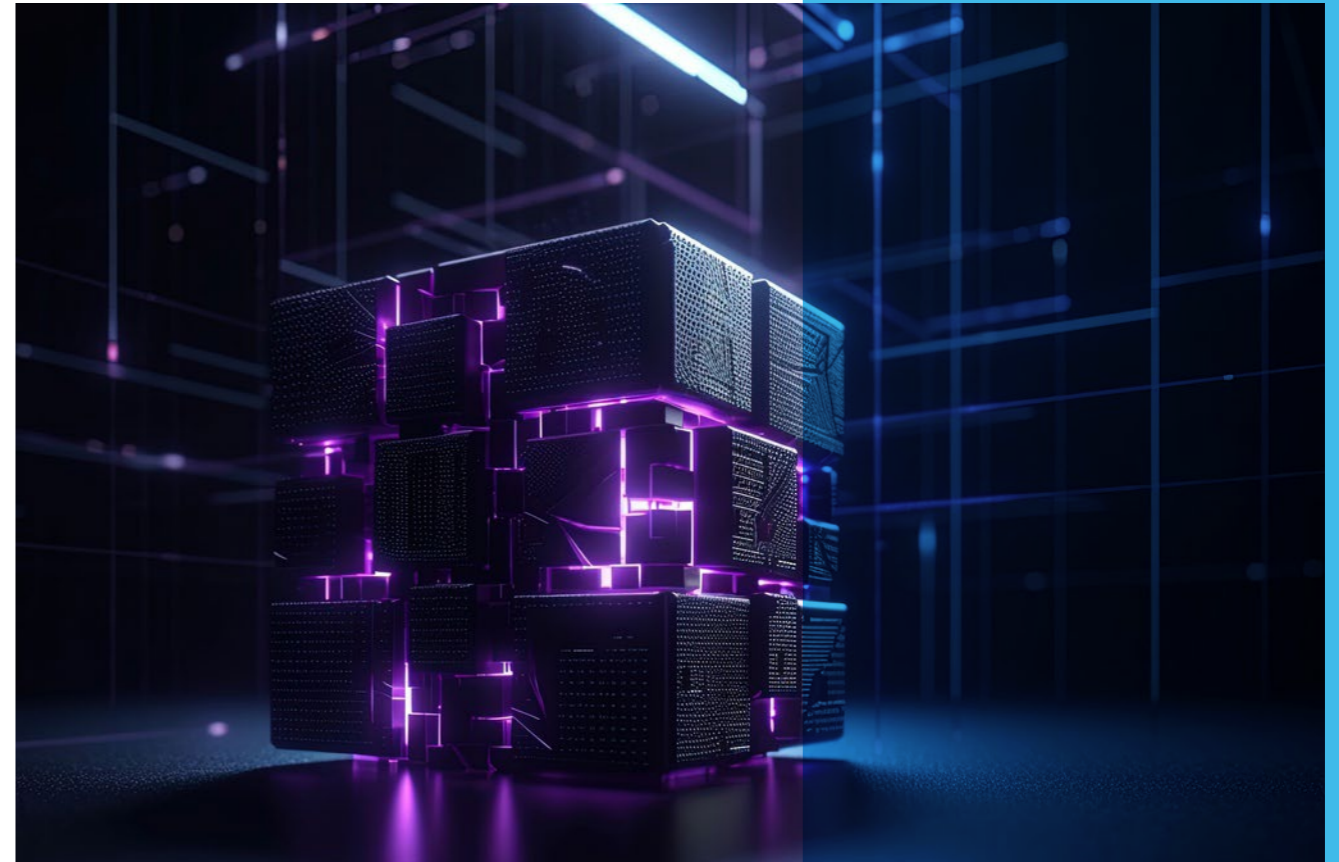
First steps!

· AI Cube will be implemented and can be connected to any PACS
· Partner Network provides AI applications, that can be bought
· Chosen AI Applications are seamlessly integrated into the diagnostic workflow
· Rules will be defined for a rule-based transmission of images (CTs, MRIs, etc.) to a specific AI solution
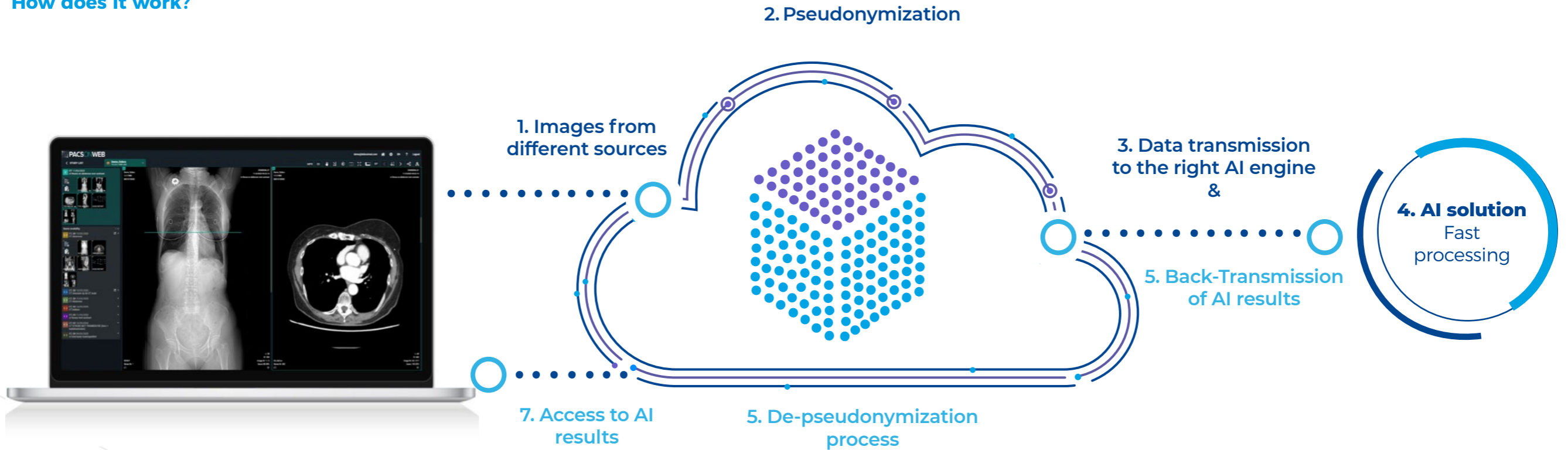
Unique value!

Special benefit for PACSonWEB Diagnostic users:
Even simpler deployment – DeepUnity AI Cube will be just enabled

DeepUnity AI Cube can be connected to any 3rd party PACS

DeepUnity AI Cube as one-stop-shop for AI applications

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SEAMLESS WORKFLOW

How does it work?

2. Pseudonymization

1. Images from different sources

3. Data transmission to the right AI engine &

4. AI solution
Fast processing

5. Back-Transmission of AI results

7. Access to AI results

5. De-pseudonymization process

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CHARACTERISTICS

Each side of the cube represents a greater value of the solution:

1. **Orchestration**: DICOM routing, cloud integration, pseudonymization

2. **Visualization**: Interactive display, dedicated reading protocols, restricted access

3. **Connectivity**: PACS neutral connectivity, effortless implementation in existing IT landscape

4. **Worklist enrichment**: AI processing status management, case prioritization, triage

5. **Reporting**: AI results feed into reports, automatic reporting

6. **Privacy and Security**: Compliant with GDPR and ISO270001 requirements

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DISCOVER THE FUNCTIONALITIES

AI-Result Transmission
Transmission of AI results directly forwarded into a PACS

One-stop-shop
Choose your AI application from our partner network

Second pair-of-eyes
AI applications can double check images

AI processing **status management**

3rd Party PACS connectivity

Pseudonymization
Patient data will be psyeudonymized – using a state-of-the-art technology

Enhanced report capabilities
AI results available as reports

Case prioritization
Urgent cases will be prioritized for an even more effective use of resources

Rule-based image transmission
Define rules so that images can be transferrred automatically to the right AI application

Standardization of AI results
AI results from different vendors will be transformed into a standardized format

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AI CUBE VALUE

IT Infrastructure

Connectivity with each PACS

Save time and cost due to less implementation effort for the chosen AI solutions

Secure transmission of images due to pseudonymized patient data

Access to validated AI Partners

We validate AI partners for you – no need to spend valuable time in doing that

Expanding AI network – Different solutions to implement seamlessly

Workflow improvements

Stay within the User Interace of your PACS client – no switching to another Interface

AI results transferred directly back into the PACS

Second "pair of eyes"

Radiologists can let AI double check the images

Radiologists can focus on difficult cases while AI manages the rest

Legend

| Higher diagnostic accuracy | Lower costs | Smoother workflow | Higher Security | Time saving |

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YOUR BENEFITS

From a business perspective

- **Partner approach:** Need help for your AI strategy? Just get in contact with us

- Profiting from a growing partner network

- We **save** your **time** for validating AI solutions – Our network exists of clinical **validated AI Partners**

- **Reducing costs** while having access to multiple AI solutions - **Less deployment effort** with our solution

From an IT perspective

- Free up time and costs - Just one deployment needed to access different AI solutions

- **Highest Interoperability** – Effortless integration with **any 3rd party PACS** vendor

- **Secure** patient data **transmission** – DeepUnity AI Cube **pseudonymizes** patient data before transmitting it to the AI solution

- **Workflow enhancement** for AI integration – Fast processing and results accessible directly in the PACS

- One-stop-shop for AI applications

From a user perspective

- **Enable multiple** AI applications

- Second "pair-of-eyes" for a **safer decision taking** and **higher diagnostic accuracy**

- **Worklist enrichment** with AI processing status management, case prioritization, triage

- **Workflow enhancement** for AI integration – Fast processing and results accessible directly in the PACS

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TECHNICAL REQUIREMENTS

The technological framework for DeepUnity AI Cube is based on the gateway of PACSonWEB, a DeepUnity solution. This gateway provides communication with the cloud, integration with the various internal systems and the caching of data if necessary. These are the hardware requirements:

Hardware Requirements			
	<10k studies / yr	<200k studies / yr	>200k studies / yr
CPU	1 vCPU 2 GHz	2 - 4 vCPU 2GHz	4 - 6 vCPU 2Ghz
RAM	6 GB	12 GB	18 GB
Operating System	Windows 10 / Windows Server 2012 R2 and higher	Windows Server 2012 R2 and higher	Windows Server 2012 R2 and higher
-	Regular Windows updates are highly recommended.		
System disk (C:)	OS recommended (min 50GB)		
Data disk (D:)	50 GB	100 GB	100 - 200 GB
Local Cache	Optional. Dependent on #years #TB/year production		
Database requirements			
-	Preferred: SQL Server on customer infra / Possible: SQL Express on gateway	SQL Server on customer infra	
Supported SQL versions			
Bandwidth	Min +50 Mbit, recommended 85-100 Mbit		

Additional information can be found in the PACSonWEB brochure.

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SECURITY DETAILS

The security details of PACSonWEB, a DeepUnity solution, apply to DeepUnity AI Cube. PACSonWEB has been designed to comply with the most stringent security requirements:

Certifications

DOBCO medical system, a Dedalus company is certified with ISO27001, ISO13485 and fully HDS-certified.
PACSonWEB is a class IIa CE certified medical device.
PACSonWEB portal is rated A+ on SSL Labs.

Protection from data loss and recovery is guaranteed and several security procedures and methods have been installed.

Privacy Policy

DOBCO Medical Systems, a subsidiary of Dedalus HealthCare, takes privacy very seriously. We treat all personal information in confidence, according to national and international legal requirements.

DOBCO Medical Systems, A Dedalus Company guarantees that all personal data will be processed in accordance with the General Data Protection Regulation (GDPR), Regulation 2018/1725.

Additional information can be found in the PACSonWEB brochure.

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Life flows through our software

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