mediaire

BERLIN, 28.03.2021 |

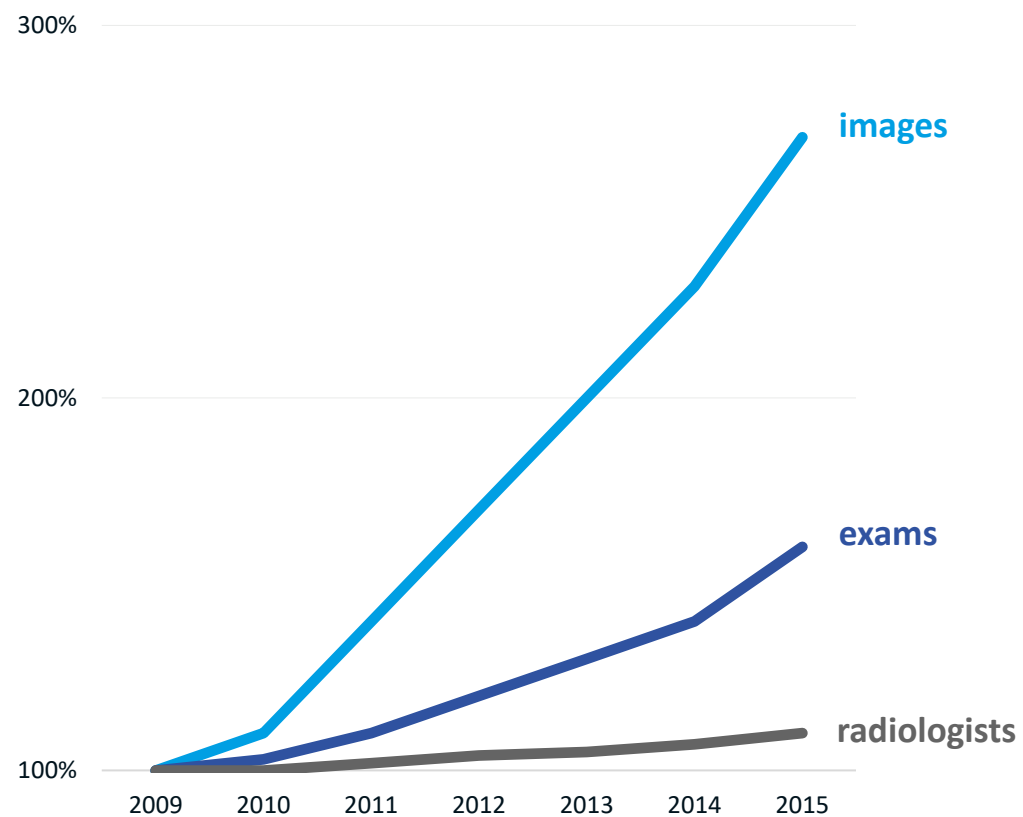# Empower Radiologists to extract full diagnostic value of their images

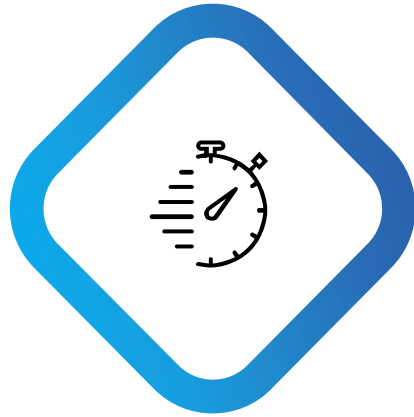Andreas Lemke, CEO

Radiologists are facing a vicious dynamic: more images, less time

images

exams

radiologists

300%

200%

100%

2009   2010   2011   2012   2013   2014   2015

The current dynamics trigger a chain of negative consequences – for everyone

More time pressure

There is an **average of 3 sec**. per image available.

Decreasing Pay

The average pay per image has **decreased by 5% p.a.**
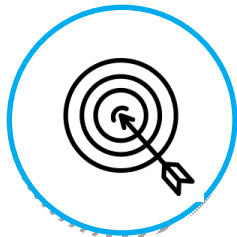
Higher Burn-Out

Increasing pressure leads to **physical and psychological stress**.

Worse patient care

While technology improves, **errors** are still likely to happen **30%** of the times**.**

AI-based Software can break vicious dynamics if certain requirements are fulfilled
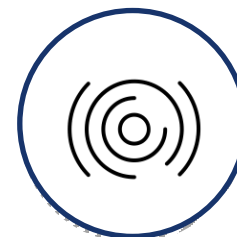
01

Accuracy #1

The accuracy of the AI must be high enough such that manual corrections are not required

02

Workflow integration #2

Distraction from their daily routine decreases efficiency and thus the software must be perfectly adapted

03

Coverage #3

The coverage of the solution must be significant allowing the radiologist to focus on only one software

04

Price per Value #4

The radiologic practice will only implement the software if the value is higher than the price

mediaire | DIGITAL INNOVATION IN RADIOLOGY

Develop software to empower Radiologists **now** extracting the full diagnostic value of their MRI images

mdbrain   mdspine   mdprostate   mdknee

LEARN MORE

mediaire: our 3-year dynamic growth journey

LAUNCH
mediaire GmbH

02/18

RELEASE
CE-Certification of
mdbrain 1.1 and QM-System (DIN 13485)

01/19

FUNDING
Seed A raised
(€ 1 Mio)

01/19

RELEASE
mdbrain 2.0

09/19

AWARD
2nd Best Start-Up in Germany

01/20

FUNDING
Series B raised
(€ 1.8 Mio)

12/20

SALES
50th customer won and
>200 reports daily sold

03/21

RELEASE
mdbrain 4.0
& mdbrainDX

04/21

About mediaire
From Radiologists for Radiologists

2018 — mediaire
Prior to mediaire: only qualitative diagnosis by radiologists

Q1 2019 — mdbrain
Automatic quantification of image information

Q2 2021 — mdbrain Dx
Deep learning-based triage
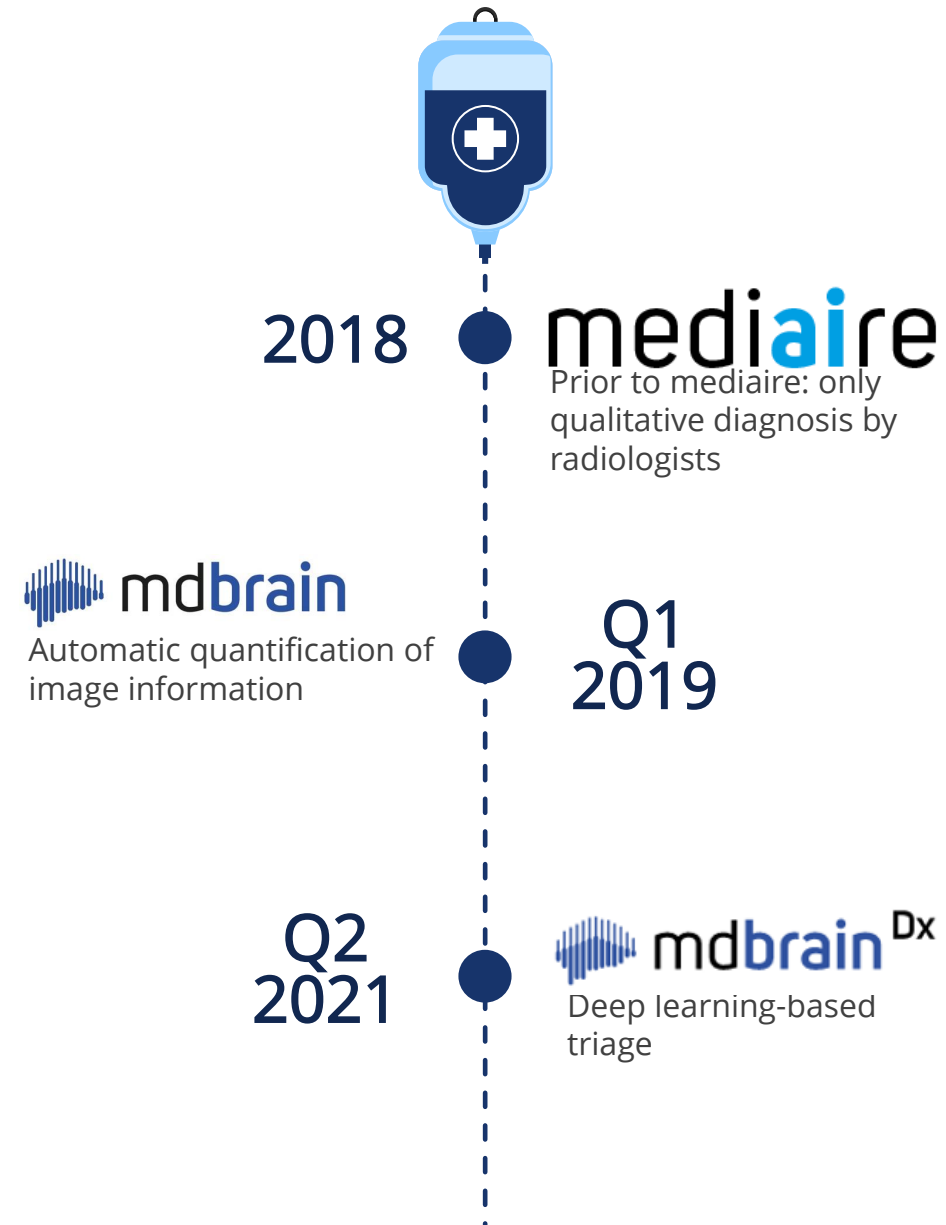
Mediaire will release the **world's first knee MRI product in Jan 2021** and cover almost **50% of all MRI exams in 2022**

Q2 2020 ● **mdspine**

Spine lesion characterization

mdknee ● **Q1 2022**

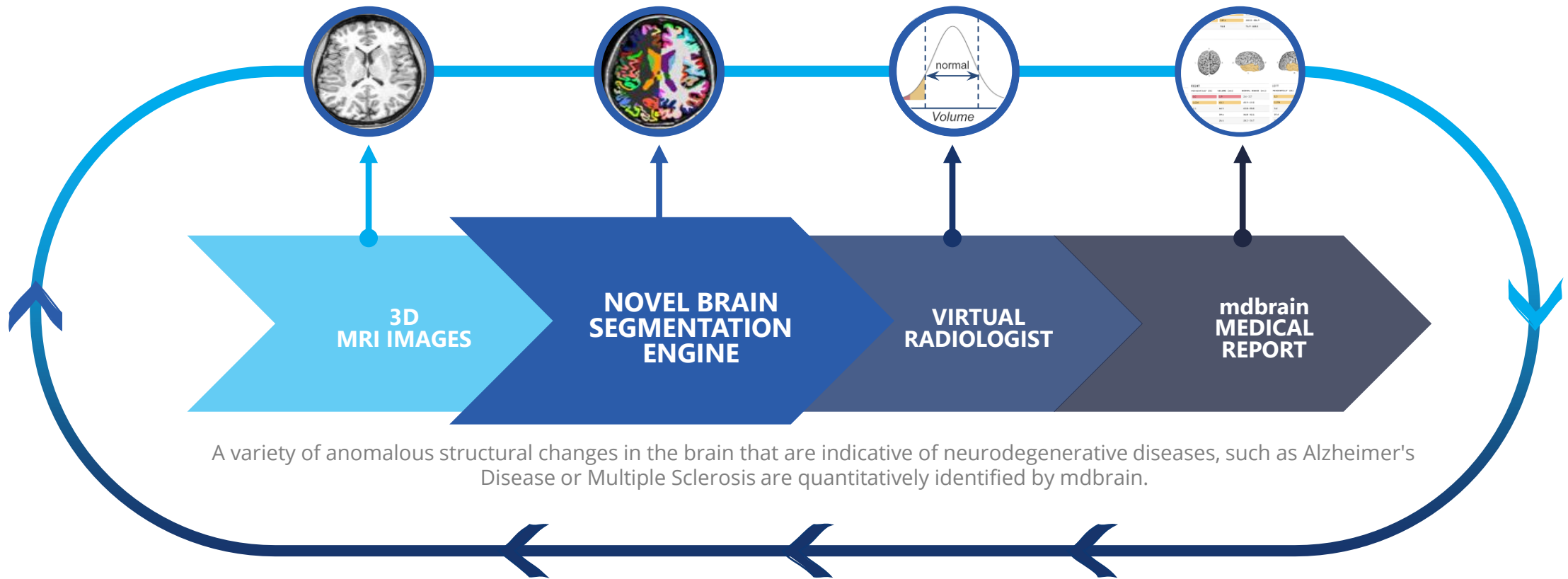Knee injury classification
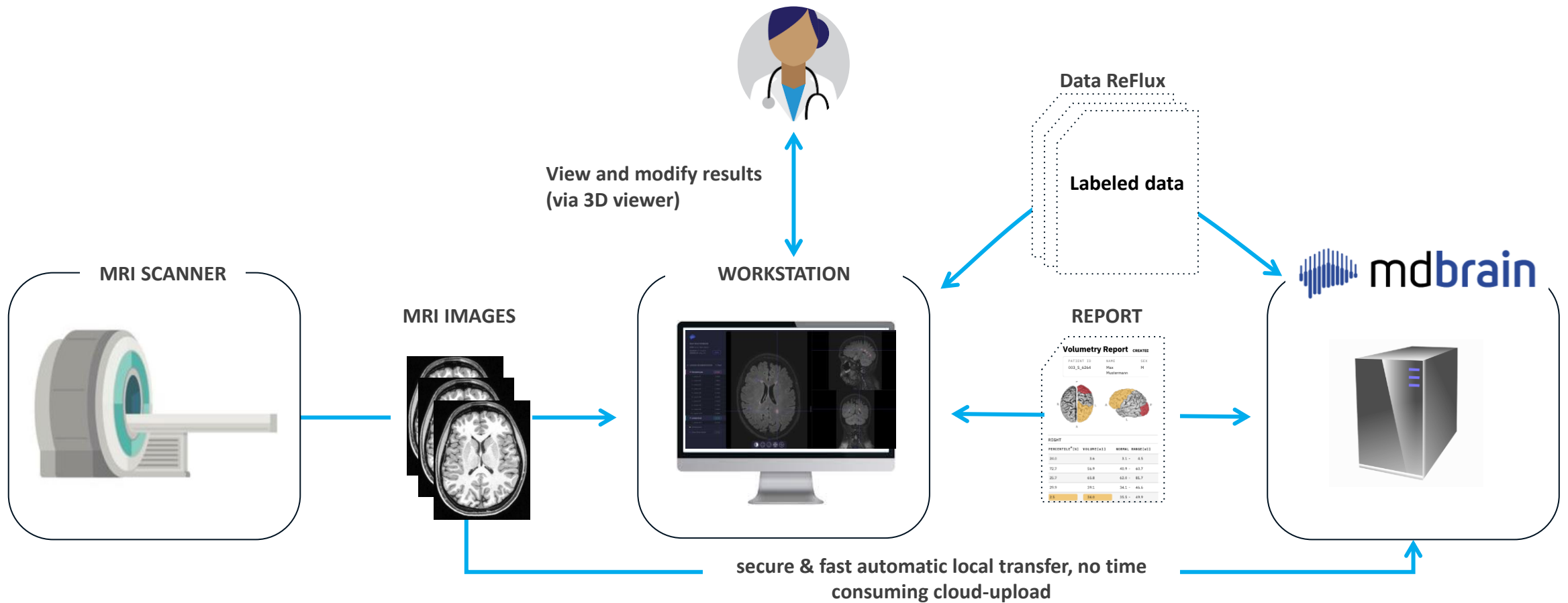
Q2 2022 ● **mdprostate**

Prostate tumor detection

...more to come!

Product Introduction

mdbrain: applying deep learning combined with a novel segmentation approach

3D MRI IMAGES → **NOVEL BRAIN SEGMENTATION ENGINE** → **VIRTUAL RADIOLOGIST** → **mdbrain MEDICAL REPORT**

A variety of anomalous structural changes in the brain that are indicative of neurodegenerative diseases, such as Alzheimer's Disease or Multiple Sclerosis are quantitatively identified by mdbrain.

mdbrain interacts seamlessly with the Radiologist and maintains 100% data security

Data ReFlux

Labeled data

View and modify results (via 3D viewer)

MRI SCANNER

MRI IMAGES

WORKSTATION

REPORT

md**brain**

Volumetry Report CREATED

PATIENT ID   NAME   SEX
003_S_6264   Max Mustermann   M

RIGHT

PERCENTILE[%]	VOLUME[ml]	NORMAL RANGE[ml]
30.0	3.6	3.1 - 6.5
72.7	54.9	40.9 - 63.7
21.7	61.8	62.0 - 81.7
29.9	39.1	34.1 - 46.6
		33.5 - 49.9

secure & fast automatic local transfer, no time consuming cloud-upload

Life cycle management & portfolio extension help to increase MRR per customer

We continuously improve our product based on customer feedback to meet their needs and expand use

mdbrain Dx

...

04/20 mdbrain DX
mdbrain 4.0

mdbrain

05/20 mdbrain V3.0

mdbrain

04/20 mdbrain V2.2

- Aneurysm detection
- Brain tumor segmentation
- Improved lesion detection

mdbrain

10/2019 mdbrain V2.0

- mdbrain: new brain regions for Parkinson's classification

mdbrain

01/2019 mdbrain V1.1

- Deep learning volumetry & GPU support
- 5 minute processing time

- Deep learning lesion detection
- 3D-Viewer

- Classical volumetry
- Simple lesion detection

mdspine

06/2019 mdbrain V1.1

...

- mdspine: Extension of MS-toolbox

Business Strategy

Targeting & Segmentation focusses on high potential accounts

Each stakeholder within an account is addressed individually based on attitudinal and behavioral factors

HOSPITALS

Parameters

- Potential & AI use pattern
- Focus in **Dementia or MS**
- License for outpatient care (§116b)

Key accounts

mdbrain installed!

- ✓ **Helios Clinics**
  148 Radiologists, 66 MRIs
- ✓ **Sana clinics**
  71 Radiologists, 14 MRIs
- ✓ **Asklepios**
  68 Radiologists, 23 MRIs

OFFICE-BASED CENTERS

- Potential & AI use pattern
- **% private patients**
- Neurological **referral network**

2 Signed!

- ✓ **Radiologie 360°**
  93 Radiologists, 39 MRIs
- ✓ **Radprax**
  59 Radiologists, 15 MRIs
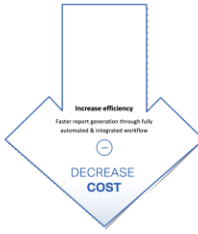- ✓ **Radiologische Allianz**
  48 Radiologists, 12 MRIs

PERSONAS
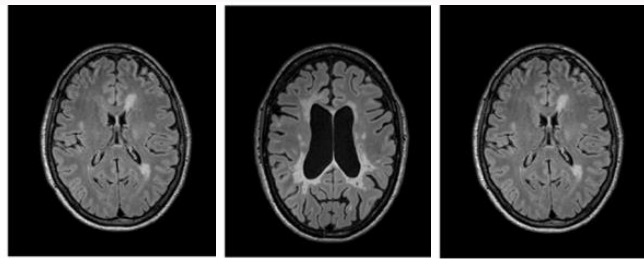
Effective manager

Quality seeker

Traditionalist& Scientists

Customer perspective: the economic case for implementing mdbrain is simple
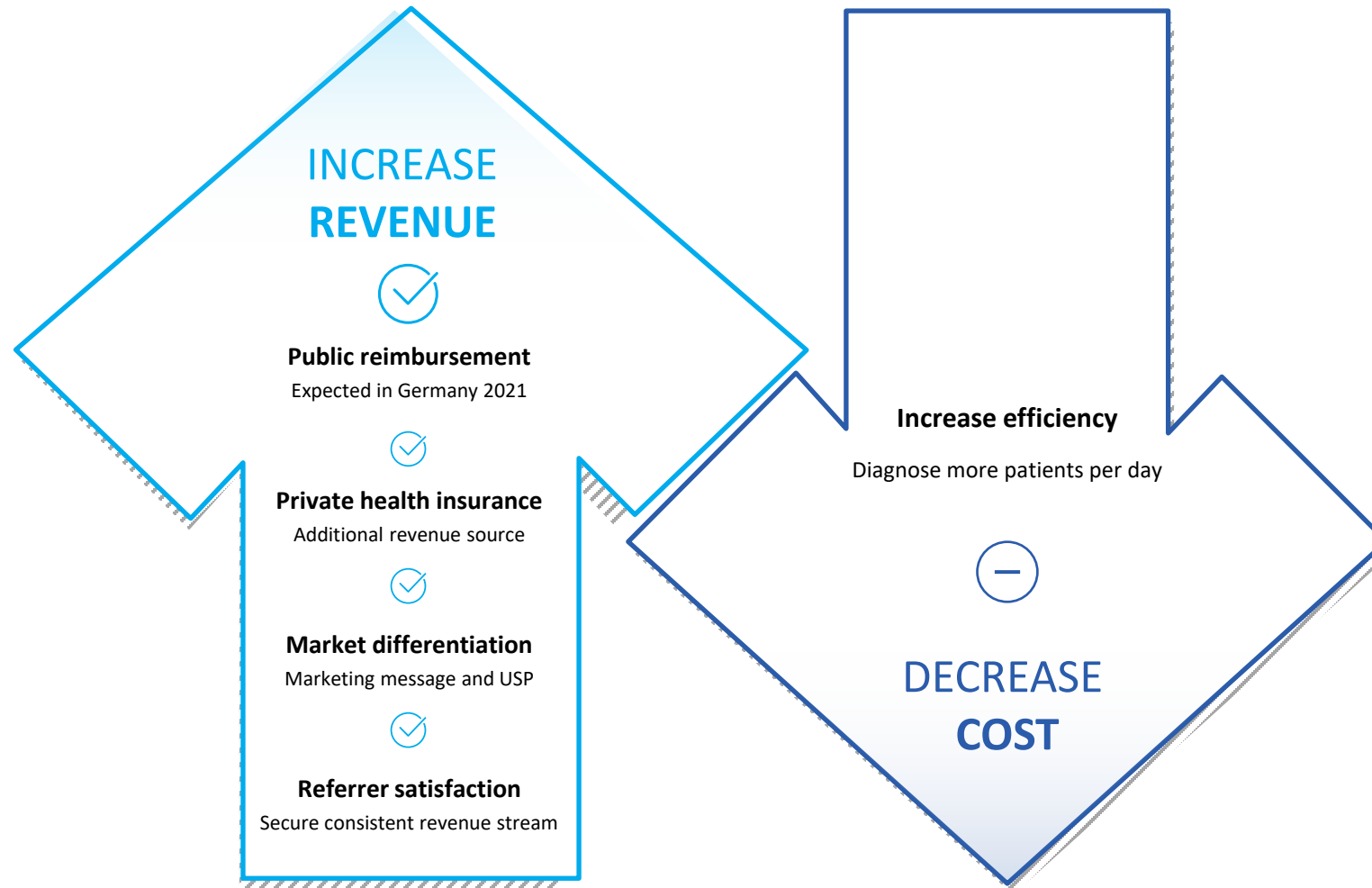
INCREASE
REVENUE

Public reimbursement
Expected in Germany 2021

Private health insurance
Additional revenue source

Market differentiation
Marketing message and USP

Referrer satisfaction
Secure consistent revenue stream

Increase efficiency

Diagnose more patients per day

DECREASE
COST

Decrease cost: Diagnose faster (case study Multiple Sclerosis)
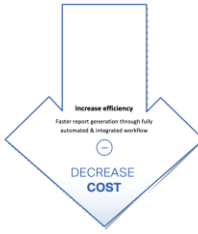
Today

- **Manually scrolling** 200 slices

- **Manual count** of brain lesions

- **Estimate** size and progression

- **Manual identification of changes** to prior scan

- Writing medical report **from scratch**

With mdbrain
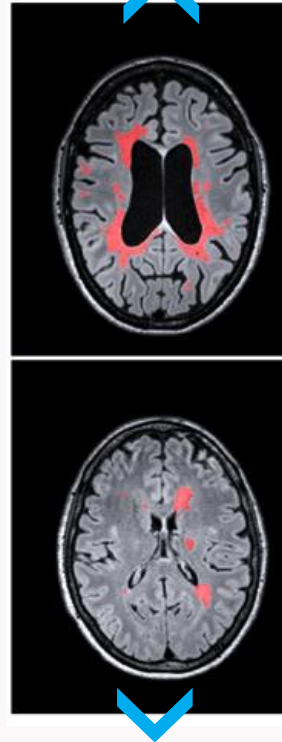
- **Scroll** through slices with **coloured lesions**

- **Automatic counting** of all brain lesions

- Measuring **volume and progression**

- **Automatic flagging** of changes to prior scan

- **Automatic generation of tables and pictures** into diagnosis report

Decrease cost: Diagnose faster (case study Multiple Sclerosis)

Today

- **Manually scrolling** 200 slices

- **Manual count** of brain lesions

- **Estimate** size and progression

- **Manual identification of changes** to prior scan
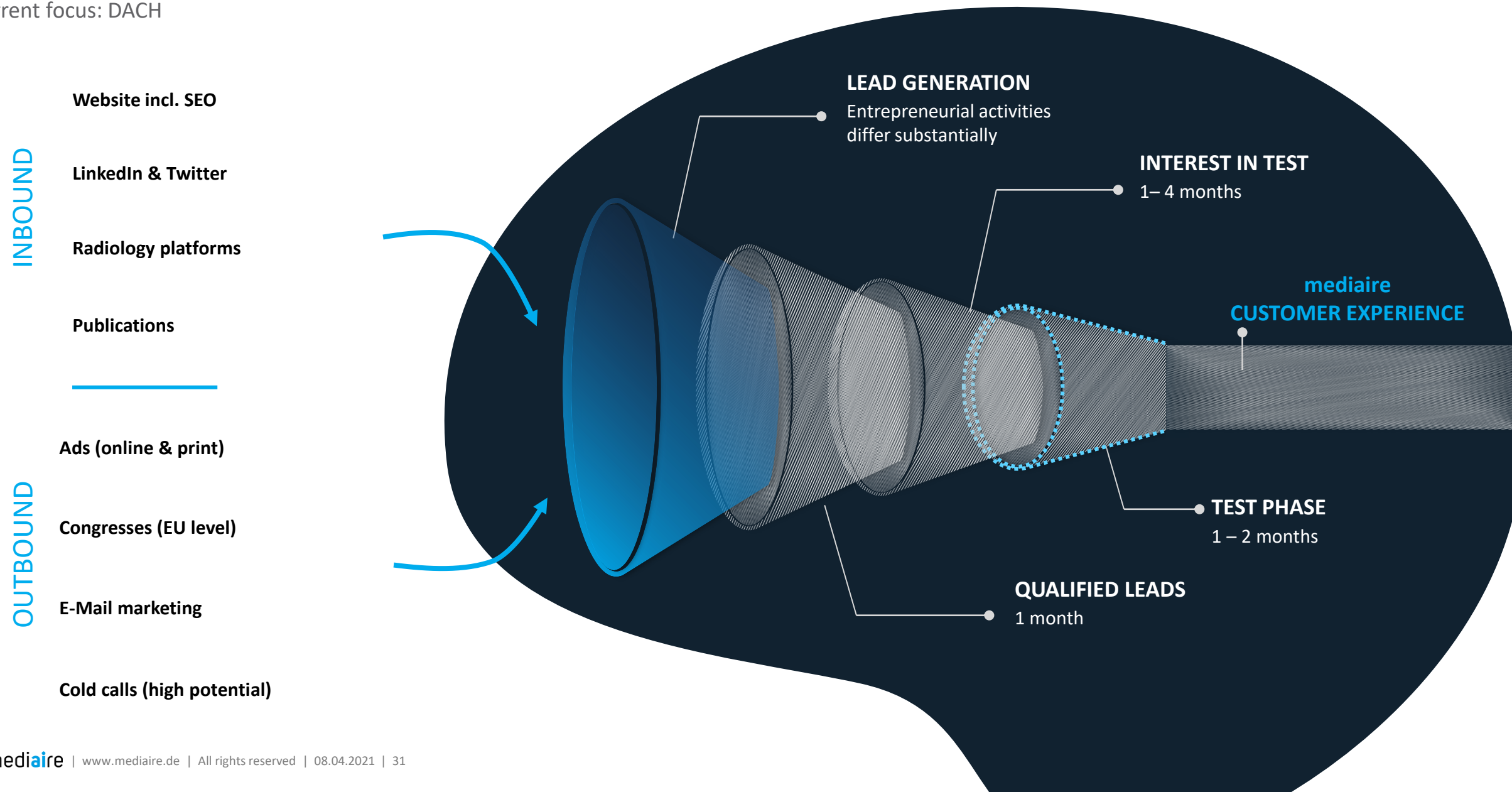
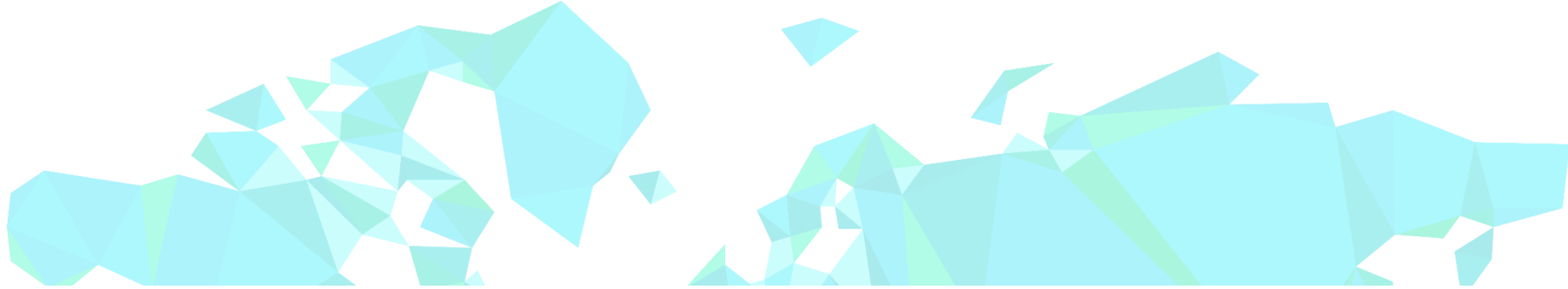- Writing medical report **from scratch**

With mdbrain

- **Scroll** through slices with **coloured lesions**

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- **Automatic flagging** of changes to prior scan

- **Automatic generation of tables and pictures** into diagnosis report

Time saving 5-10 min

Cost saving 20€

© mediaire

A multichannel strategy fills our sales funnel and generates positive customer experience

Current focus: DACH

INBOUND

Website incl. SEO

LinkedIn & Twitter

Radiology platforms

Publications

OUTBOUND

Ads (online & print)

Congresses (EU level)

E-Mail marketing

Cold calls (high potential)

LEAD GENERATION
Entrepreneurial activities
differ substantially

INTEREST IN TEST
1– 4 months

mediaire
CUSTOMER EXPERIENCE

TEST PHASE
1 – 2 months

QUALIFIED LEADS
1 month

We value and leverage both our scientific and business development partners

SCIENTIFIC COOPERATIONS

BUSINESS COORPERATIONS

MRI
Klinikum rechts der Isar
Technische Universität München

CHARITÉ
UNIVERSITÄTSMEDIZIN BERLIN

Universitätsklinikum Erlangen

LMU KLINIKUM
DER UNIVERSITÄT MÜNCHEN

INSELSPITAL
UNIVERSITÄTSSPITAL BERN
HÔPITAL UNIVERSITAIRE DE BERNE

UKSH

UNIKLINIK KÖLN

SMART REPORTING

Integration in
structured reporting

QMENTA

Clinical trials &
global presence

TELEPAXX

Platform and PACS
integration

Company & Team

We believe adding an extra pair of eyes improves diagnostic efficiency and patient outcome

VISION

Accurate medical diagnoses,
accessible for everyone.

MISSION

We create a **reliable and affordable AI-colleague** in **close collaboration** with the **radiology community**.

DEDICATION   INTEGRITY   CUSTOMER-CENTRIC   TEAMWORK   INNOVATION

We are passionate MRI & AI engineers who turned their first customers into co-founders

Dr. Andreas Lemke

#CEO #Founder #Lead Engineer

#MRI Physicist & Entrepreneur

Dr. Jörg Döpfert

#CTO # Founder #AI Engineer

#MRI Physicist & AI Engineer

Prof. Dr. Michael Fenchel

#Advisor Radiology #Founder

#Radiologist

Prof. Dr. Henrik Michaely

#Advisor Radiology #Founder

#Radiologist

Dr. Jens Opalka

#CMO #Sales #BizDev

#Neurologist

Who already believes in us – extract from our awards

Rated #2 in TOP 50 German Start-up

We are grateful to our partners (employees) for making us the company that we are. And we are honored to be acknowledged for their efforts.

Winner
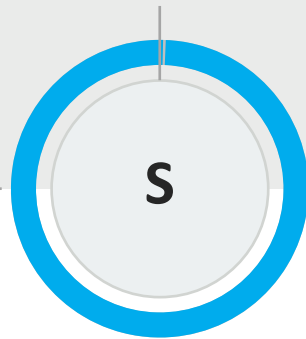
**Science4Life
Venture Cup
2019**

★ ★ ★ ★ ★

Winner

**Deep Tech
Award
2019**

★ ★ ★ ★ ★

Winner

**Bundeswettbewerb "Digitale
Inovationen" 2018**

★ ★ ★ ★ ★

Transparency of strenghts and weaknesses to mitigate potential drawbacks and risks

We are confident that core threats and weaknesses are not inherent in the product, but can rather be countered by add-on marketing spend
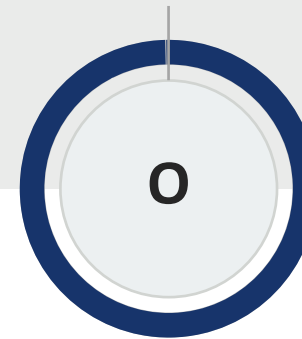
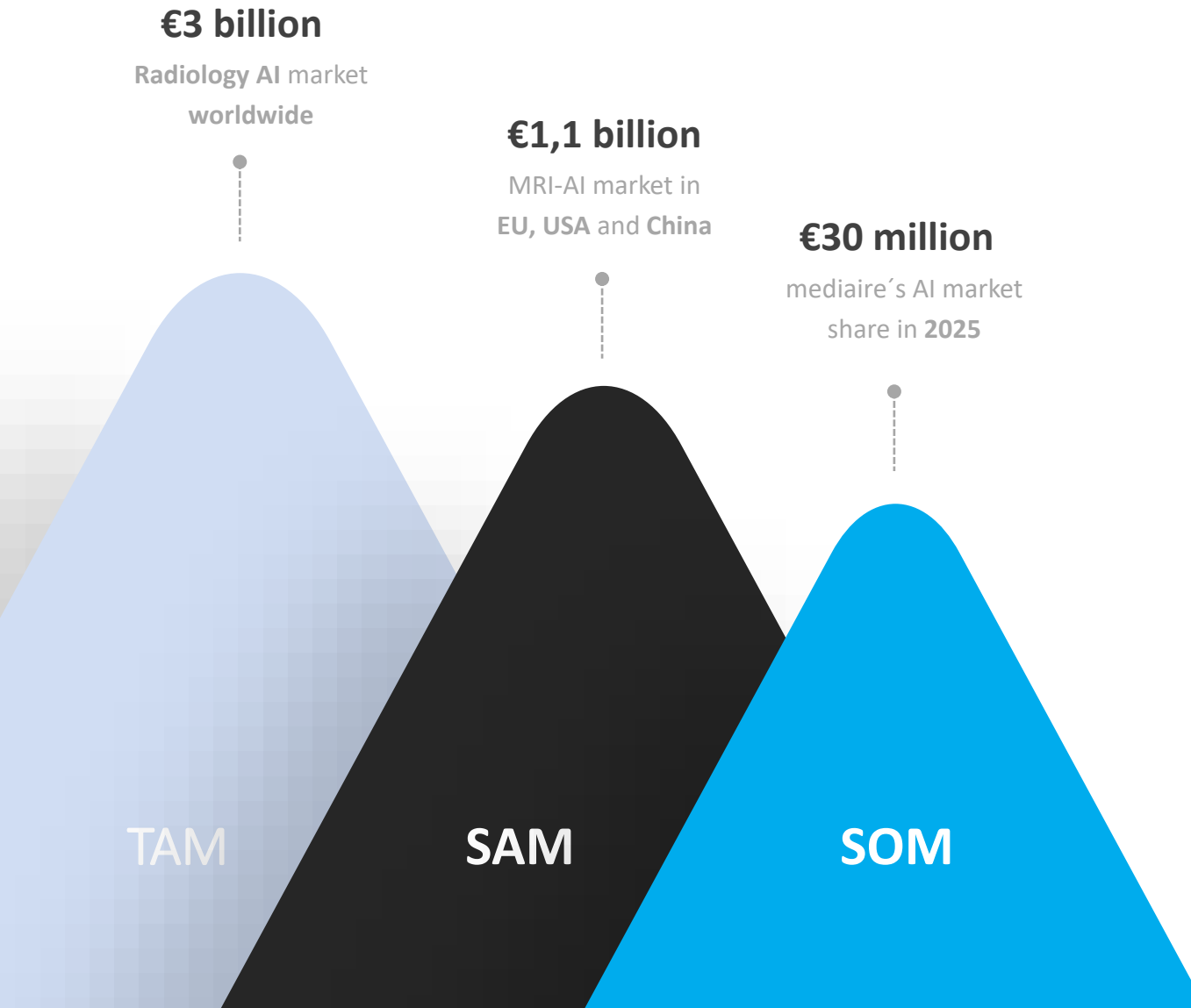| STRENGTH	WEAKNESS	OPPORTUNITIES	THREAT
S	**W**	**O**	**T**
• Product USPs & product pipeline • Efficient data sourcing • Commercial traction in DACH incl. big clients • Experienced and highly motivated team • mediaire is MDR ready	• Limited brand awareness • Limited geographical presence • Limited funding compared to competitors	• AI adoption increasing • New product upselling • Public reimbursement accelerating adoption • Geographical expansion within EU-5	• Expensive promotional activities by competitors • MRI vendors leverage their sales power, overcome tech disadvantage • New products don't reach product-market fit immediately

Market & Financials

Radiology is at the start of AI-technology innovations expected to disrupt all aspects of the profession

€3 billion

Radiology AI market worldwide

€1,1 billion

MRI-AI market in EU, USA and China

€30 million
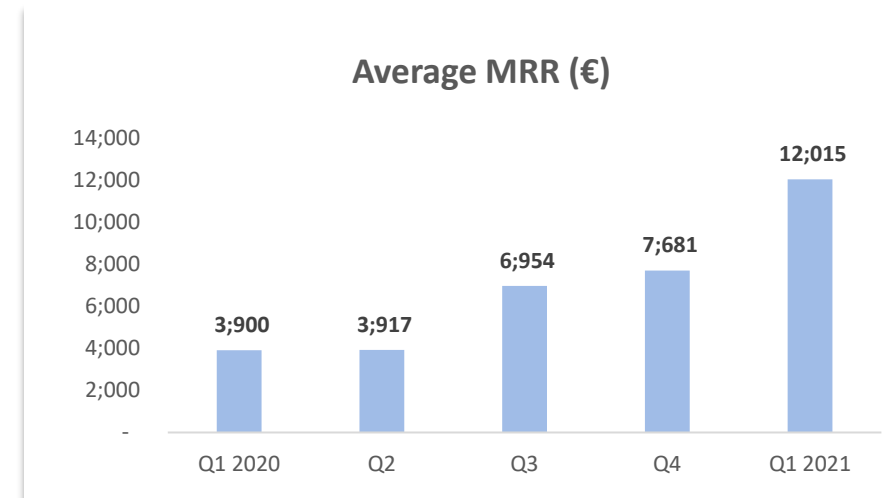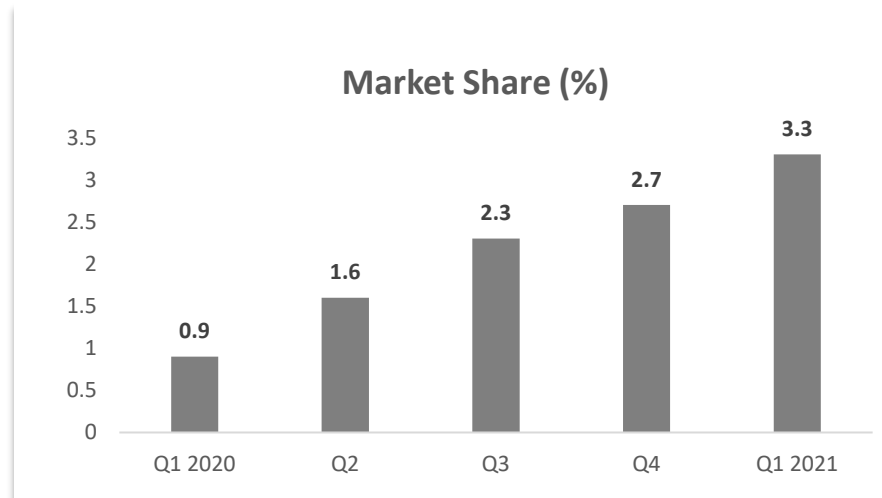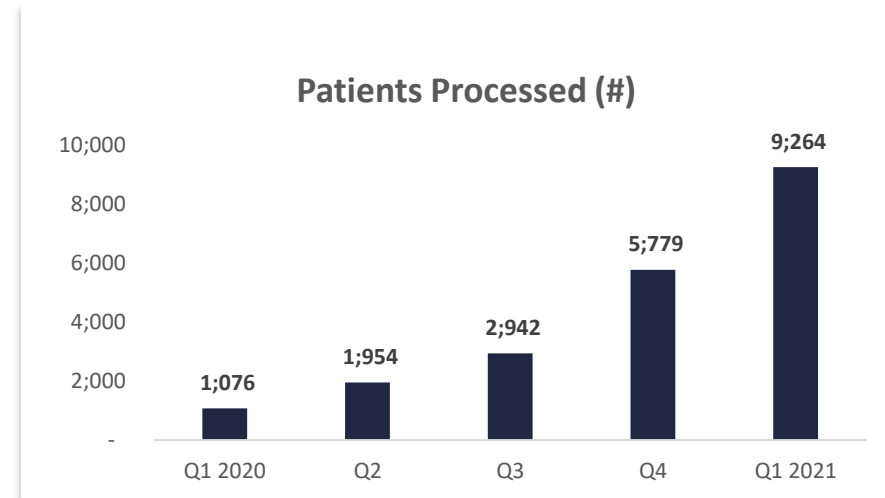
mediaire´s AI market share in 2025

TAM

SAM

SOM

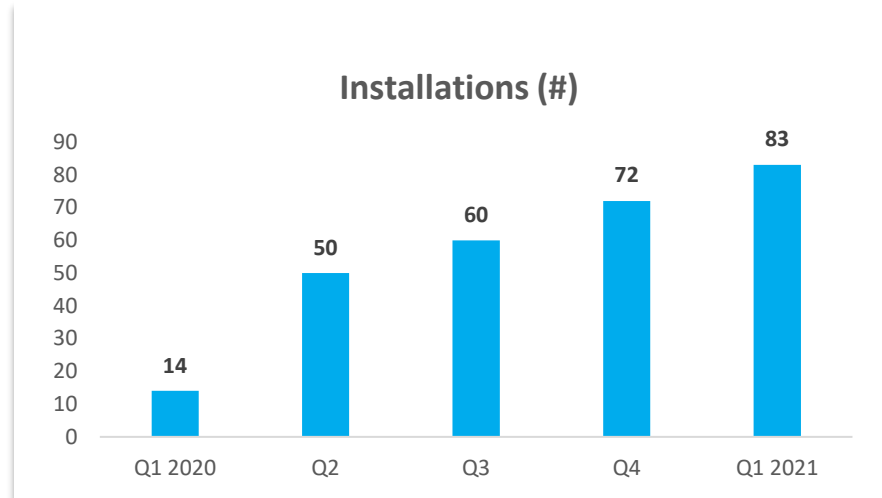## 16.5% CAGR (2018-2027)

The market for machine learning supported imaging diagnostics predicts € 1.7B in 2023 and € 3B in 2027*.

10k radiology practices in EU and US with >1.5B MRI images from 15M patients annually. A deficit of 50k radiologists is estimated within the next decade.

mediare expects a market share in MRI-AI radiology applications of 25%, thus leading to € 30M revenue in 2025.

Our new subscription SaaS model creates both trust and high demand

STARTER

150€
Per month, billed quarterly

10 reports incl.

15€ per extra report

900€ installation fee

2h monthly support incl.

Suits individual practices getting to know AI

STANDARD

600€
Per month, billed quarterly

75 reports incl.

8€ per extra report

900€ installation fee

8h monthly support incl.

Catering to small practices seeking full automation

PREMIUM

1500€
Per month, billed quarterly

300 reports incl.

5€ per extra report

900€ installation fee

Unlimited support

Serving practices with several MRIs and full automation

ENTERPRISE

2950€
Per month, billed quarterly

1200 reports incl.

2€ per extra report

900€ installation fee

Multi-PACS installation

The AI-suite for radiological enterprises with multiple locations

Most important KPIs show significant growth - especially considering Q1 2021

Installations (#)

Q1 2020	14
Q2	50
Q3	60
Q4	72
Q1 2021	83

Patients Processed (#)

Q1 2020	1;076
Q2	1;954
Q3	2;942
Q4	5;779
Q1 2021	9;264

Market Share (%)

Q1 2020	0.9
Q2	1.6
Q3	2.3
Q4	2.7
Q1 2021	3.3

Average MRR (€)

Q1 2020	3;900
Q2	3;917
Q3	6;954
Q4	7;681
Q1 2021	12;015

Q1 2021 numbers include projections for missing March days

Our model scales: where we are and where we are going

PHASE 1:
COMMERCIAL TRACTION

04/2018 – 12/2020
Focus country: Germany
Launch: md**brain** & md**spine**
MRR € 7,241

PHASE 2:
GEOGRAPHICAL & PRODUCT EXPANSION

01/2021 – 12/2022
Focus countries: DACH & EU-5
New launch: md**brainDX**, mdk**nee**, md**prostate**
MRR € 319,000

PHASE 3:
GLOBAL COMMERCIAL MARKET LEADER

01/2023 – 6/2024
Focus countries: USA and China
New launch: md**heart**, md**brain-suite** (incl. CT)
MRR € 1187,000

Our strategy

OUR AMBITION

Market leader within MRI radiology

2021

111
Customers

€ 1Mio
Run Rate

2023

543
Customers

€ 10Mio
Run Rate

MUST-WIN BATTLES	KEY METRICS	STRATEGIC INITIATIVES
Commercial growth Execute our GTM strategy to become market leader within AI-MRI applications	# Customers # Reports Revenue/MRR Market share	• Upselling mdbrainDX to mediaire customers • Reactivation of lost customers with new products • Grow into EU-5 markets in 2022 • Freemium to premium
Customer-centric products Co-creation of product features with our radiologic community for exceptional customer experience	Retention rate Customer lifetime value Conversion rate Net Promoter Score Proven efficiency gain	• Transformation from support and key account sales to customer success team • Improved customer onboarding • Transition from pay-per-use to subscription model • Efficiency gain studies
Competitive advantage Execute the fastest product development, exponential data growth and securing the IP of the proprietary ML models	# Products and coverage # Acquired and labeled data R&D costs per product # Patents	• Apply Deep Learning SOPs to future products • Leverage access to data from customers • Build up powerful patent-portfolio

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GET IN TOUCH

Follow us or reach out!
We're happy to share a demo, discuss or have a coffee.

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