Richtige Diagnose

Erfolgreiche Behandlung

Studie zu Zweitmeinung:

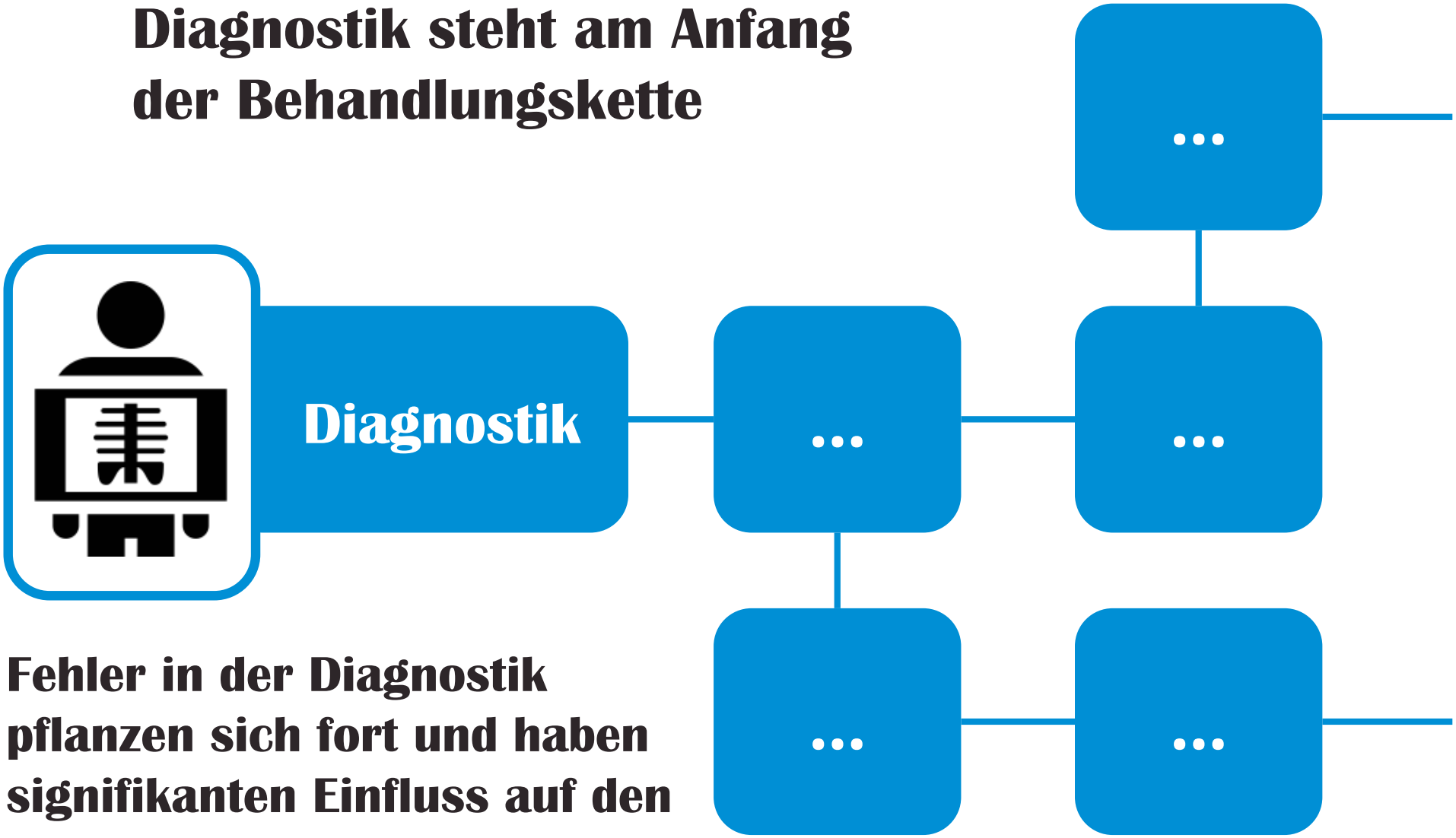
nur 25%

von Verdachtsdiagnosen wurden durch Zweitmeinung von Referenzzentrum bestätigt

Quelle: Teleradiologische Konsiliardiagnostik eines Referenzzentrums für muskuloskelettale Erkrankungen: Analyse von 322 Einsendungen
DOI: 10.1055/s-0036-1581706

In den meisten Radiologieabteilungen wird Qualität nicht systematisch gemessen!

Diagnostik steht am Anfang der Behandlungskette



Fehler in der Diagnostik pflanzen sich fort und haben signifikanten Einfluss auf den

Behandlungserfolg

Radiologie: Kapazitäten?

Jährliche Wachstumsraten

MR & CT Untersuchungen

6%

Radiologen

3%

Bevorstehende Krise: Radiologenmangel

Zeitraum: 2012-2014.

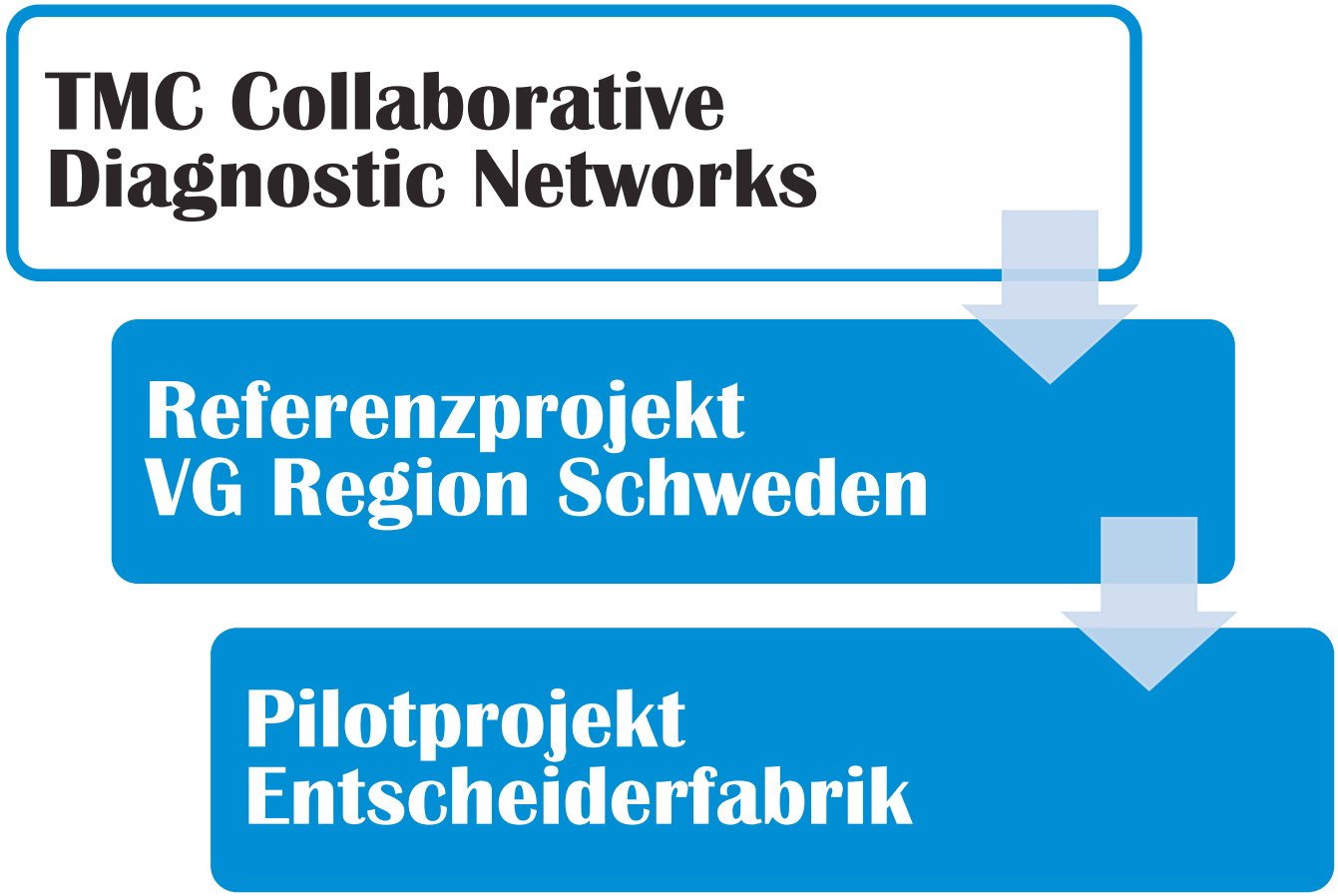
Quellen: Bundesamt für Strahlenschutz

Herausforderungen:

Diagnostische

Qualität

Kapazität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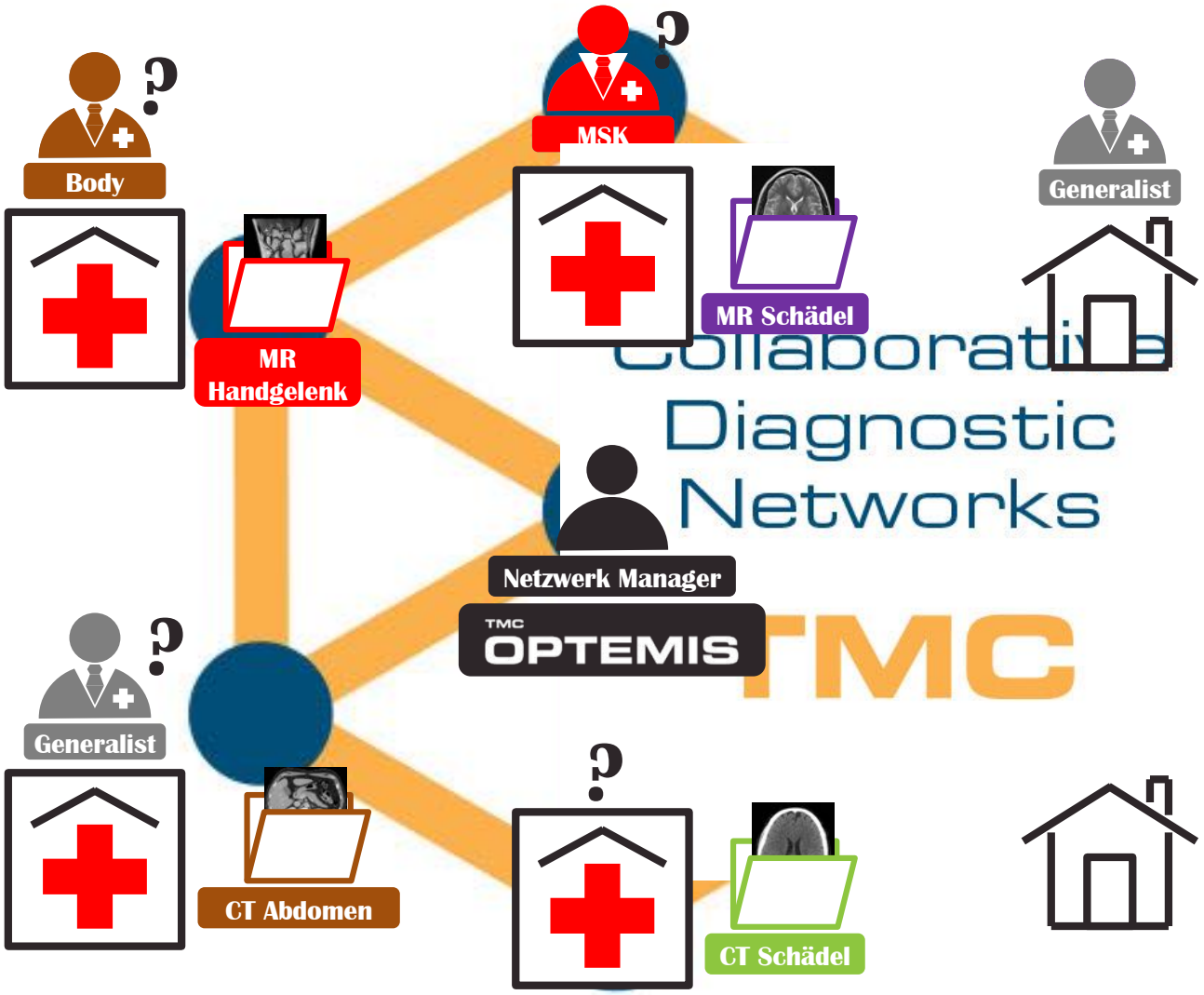
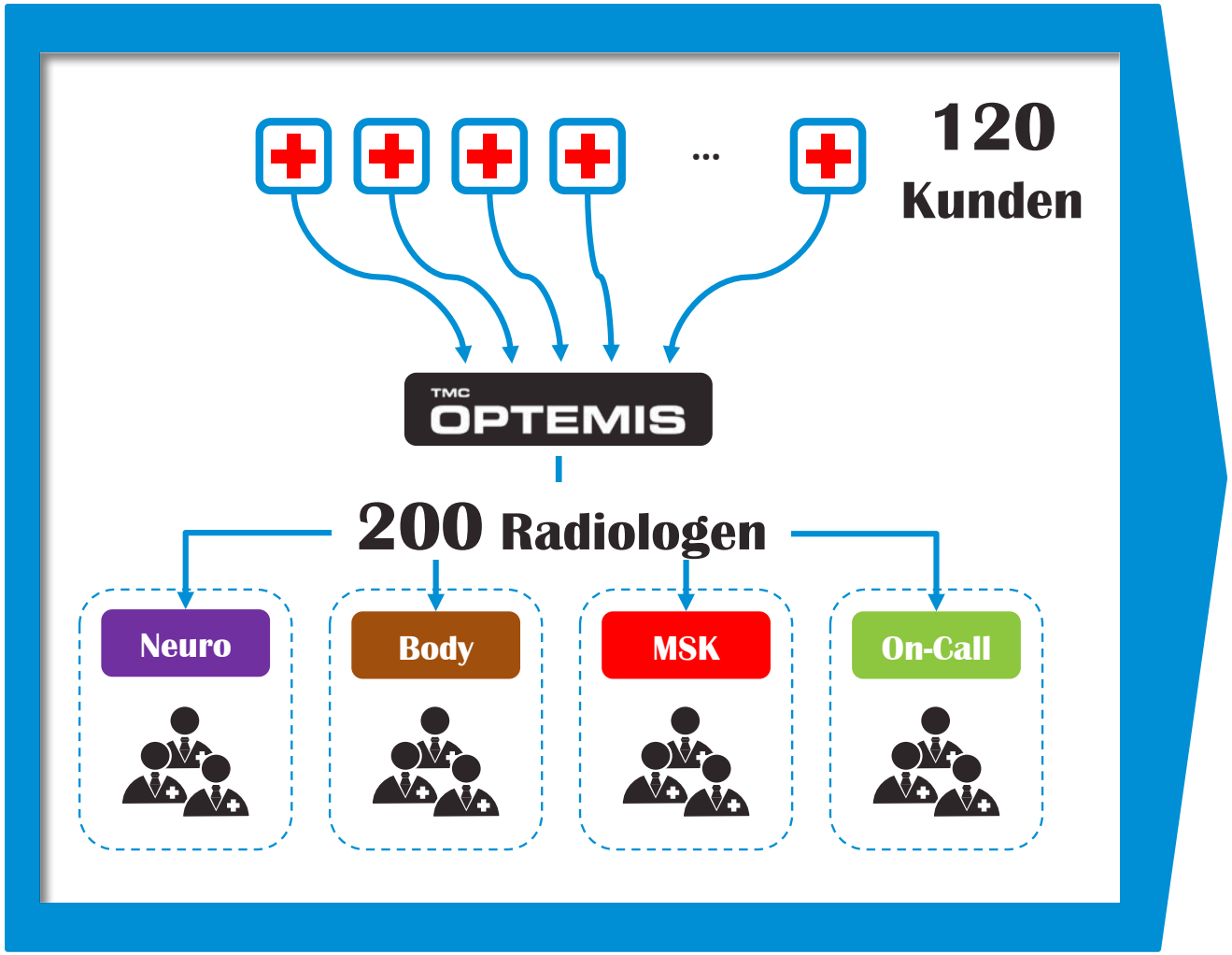
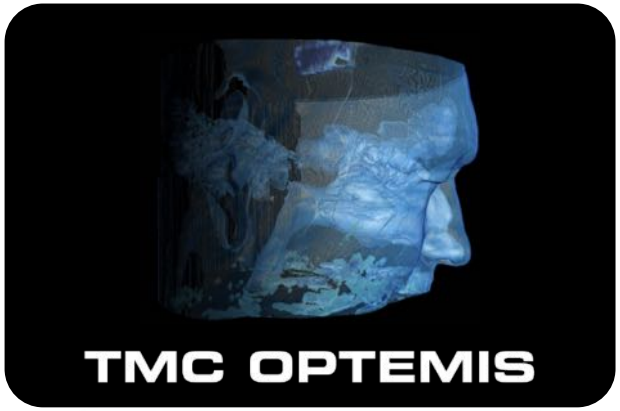
Diagnostic Networks
Referenzprojekt
VG Region Schweden
Pilotprojekt
Entscheiderfabrik


Body
MR Handgelenk
MSK
MR Schädel
Generalist
Collaborative
Diagnostic
Networks
Netzwerk Manager
TMC
OPTEMIS
TMC
Generalist
CT Abdomen
CT Schädel

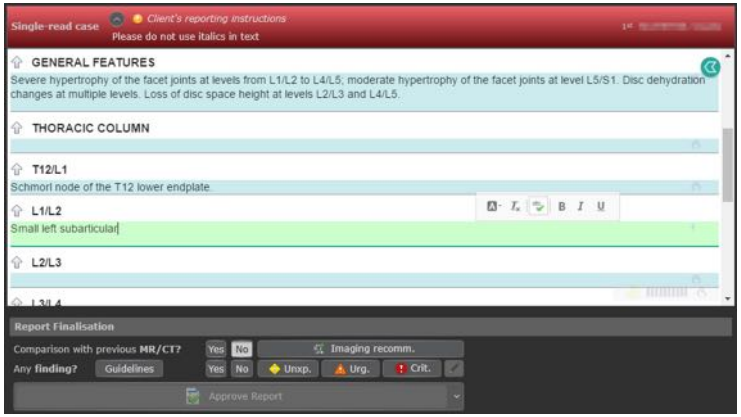
Warum TMC?



TMC hat die Technologie und das Know-How um diagnostische Netzwerke zu etablieren



Befundung

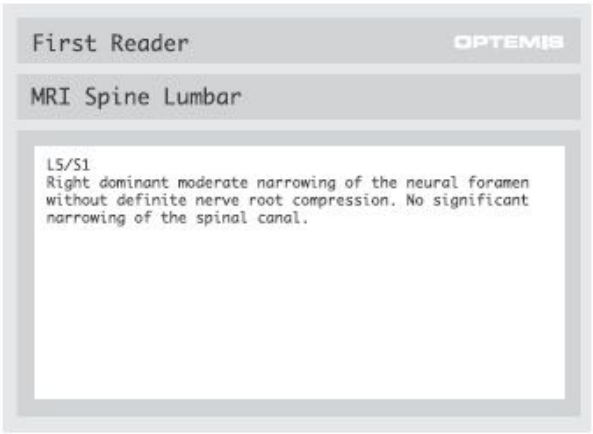


Netzwerkmanagement

Qualitätssicherung: Zweitbefundung

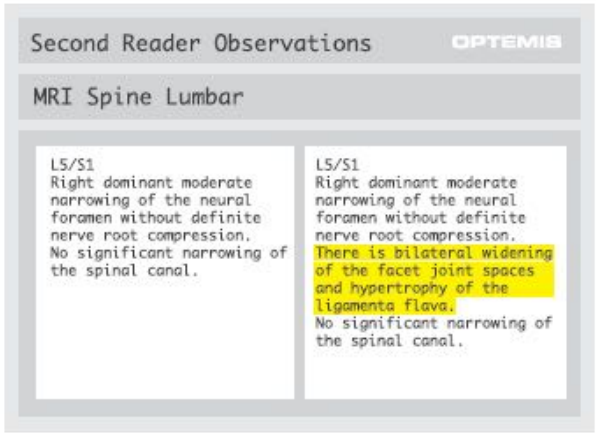
Erstbefunder

Erstellt Erstbefund



1

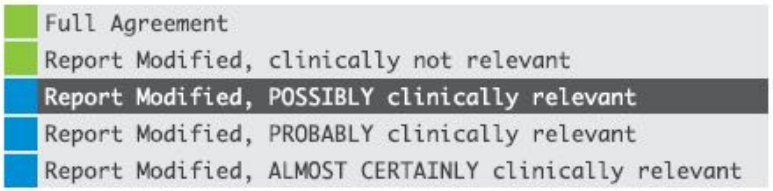
Sieht Erstbefund und Zweitbefund mit Korrektur



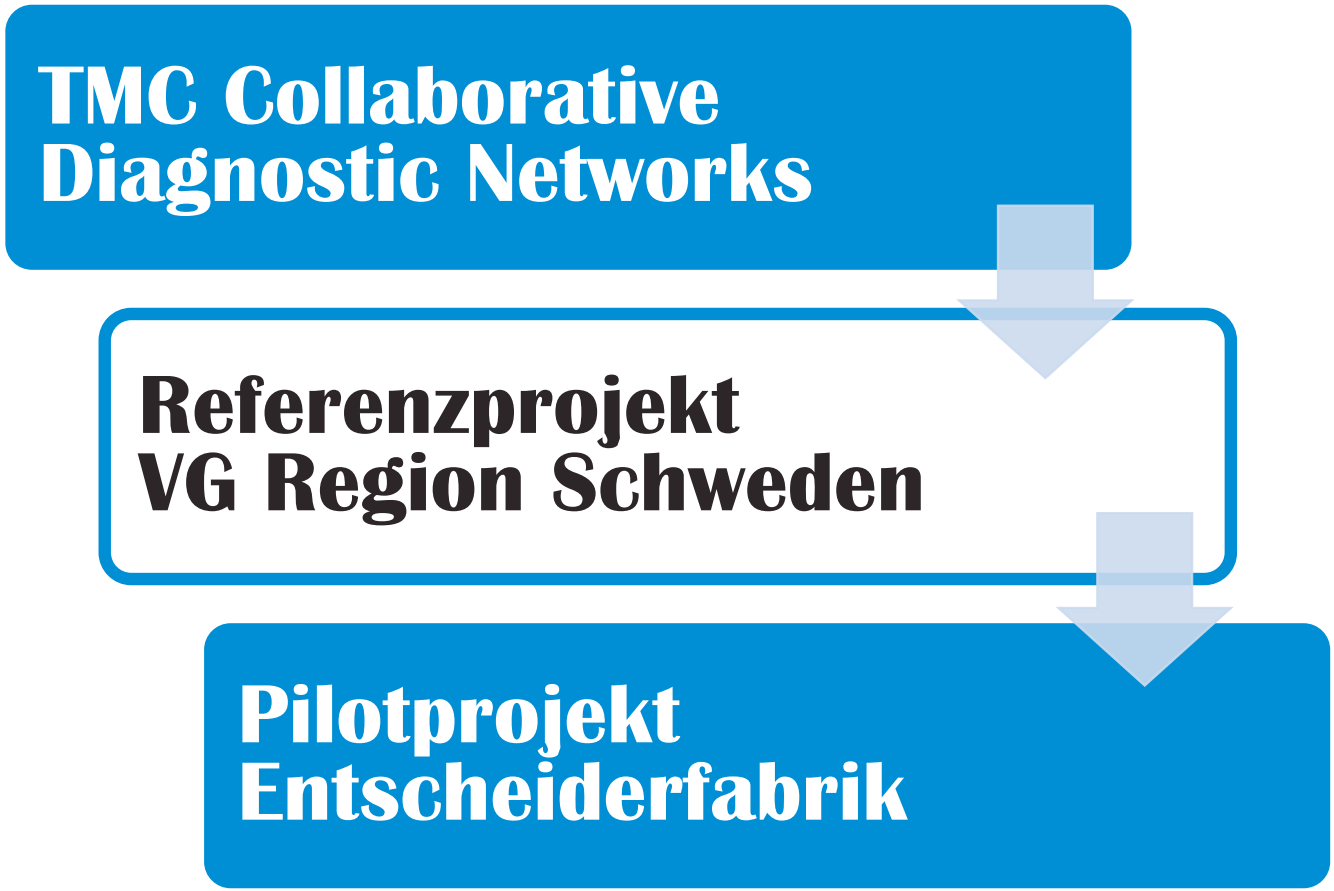
3

2

Zweitbefunder



Korrigiert Erstbefund und wählt Diskrepanzlevel aus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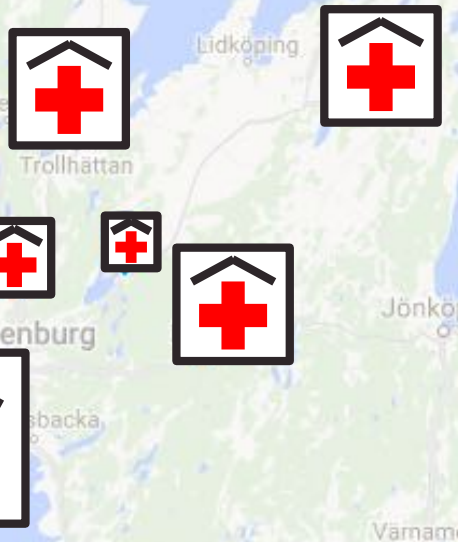
Referenzprojekt
VG Region Schweden
Pilotprojekt
Entscheiderfabrik

Västra Götaland Region



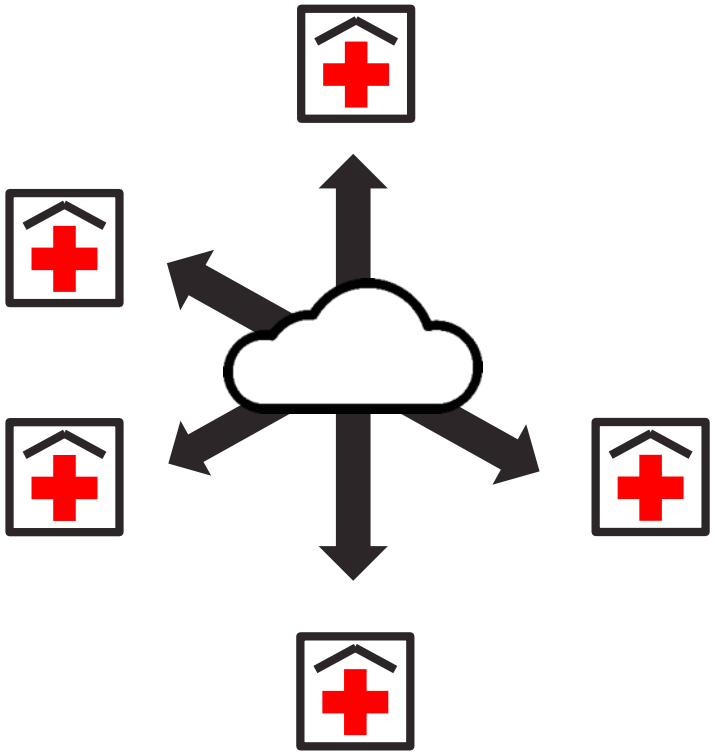
Not enough radiologists

Radiologists mostly generalists

Long waiting lists

High teleradiology outsourcing volumes

Technology was in place to share images and RIS info for many years

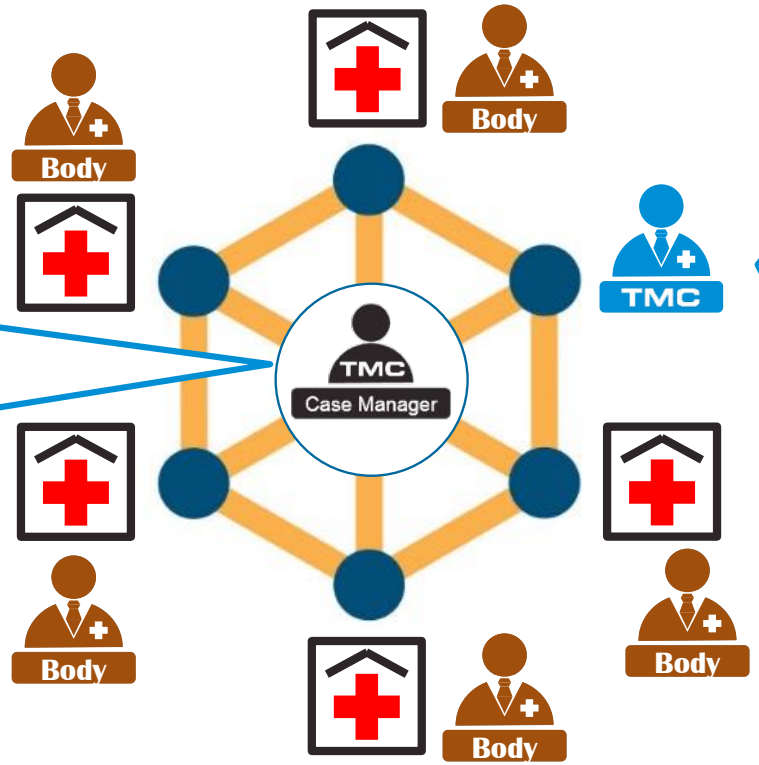


but No case exchange

Missing know-how & tools for operating network

No central management

Body MR subspecialist network



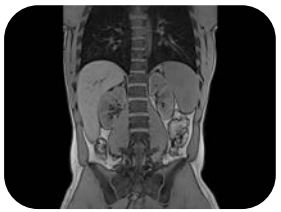
Network management by TMC

- Case assignment
- Capacity planning

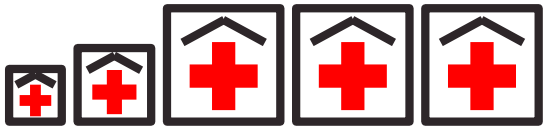
TMC Services

- Quality control by TMC: Second reading
- Case based training sessions
- Organisation of internal clinical training sessions

One radiologist per hospital was selected to become MR body expert



Getting everyone on board



All hospitals in network

University hospital

Total transparency!

Local managers

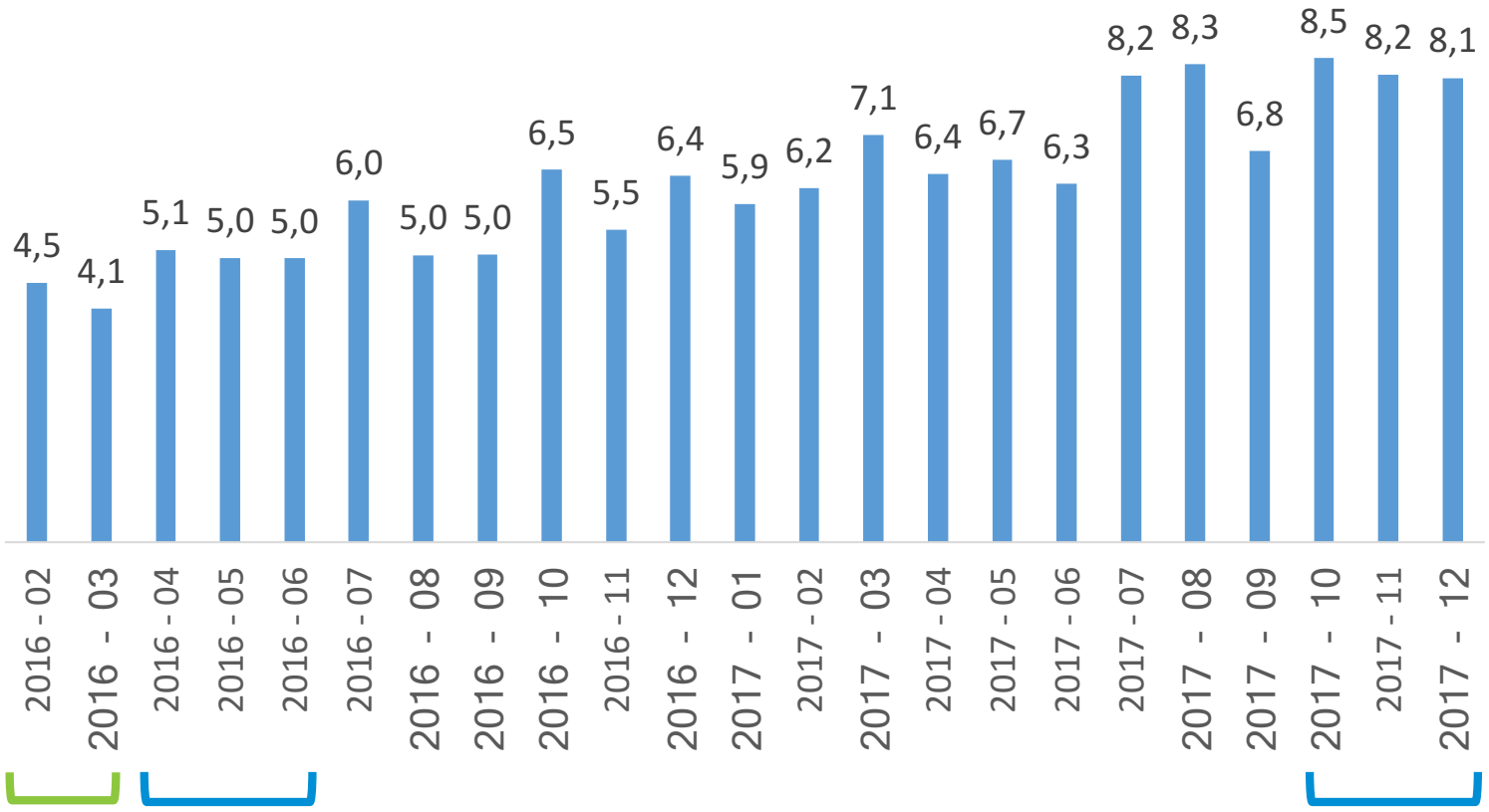
Radiologists

Regional managers

IT

Results after 2 years of operation

Reporting efficiency (Rad-Units/h)



Introduction phase

- **Getting used to reporting environment**
- **Train voice recognition**

5.0 → **8.2**

Efficiency increase

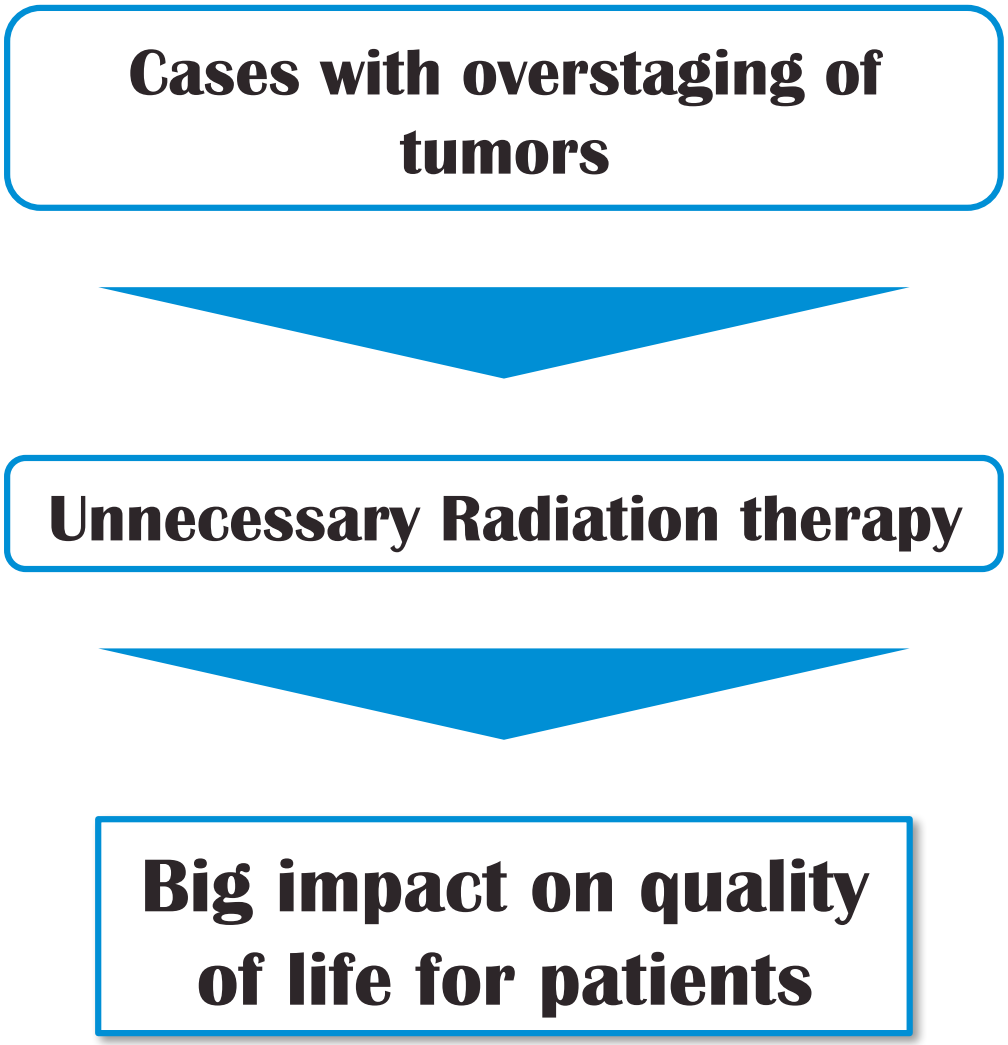
65%

Reporting efficiency increase

65%

Significant potential for cost savings

Quality: Audit before project



Quality: Training during project

Clinical sessions by

Prof. Lennart Blomqvist

Karolinska Institutet

Second reading by

Assoc. Prof. Michael Torkzad and others

TMC

UPPSALA UNIVERSITET

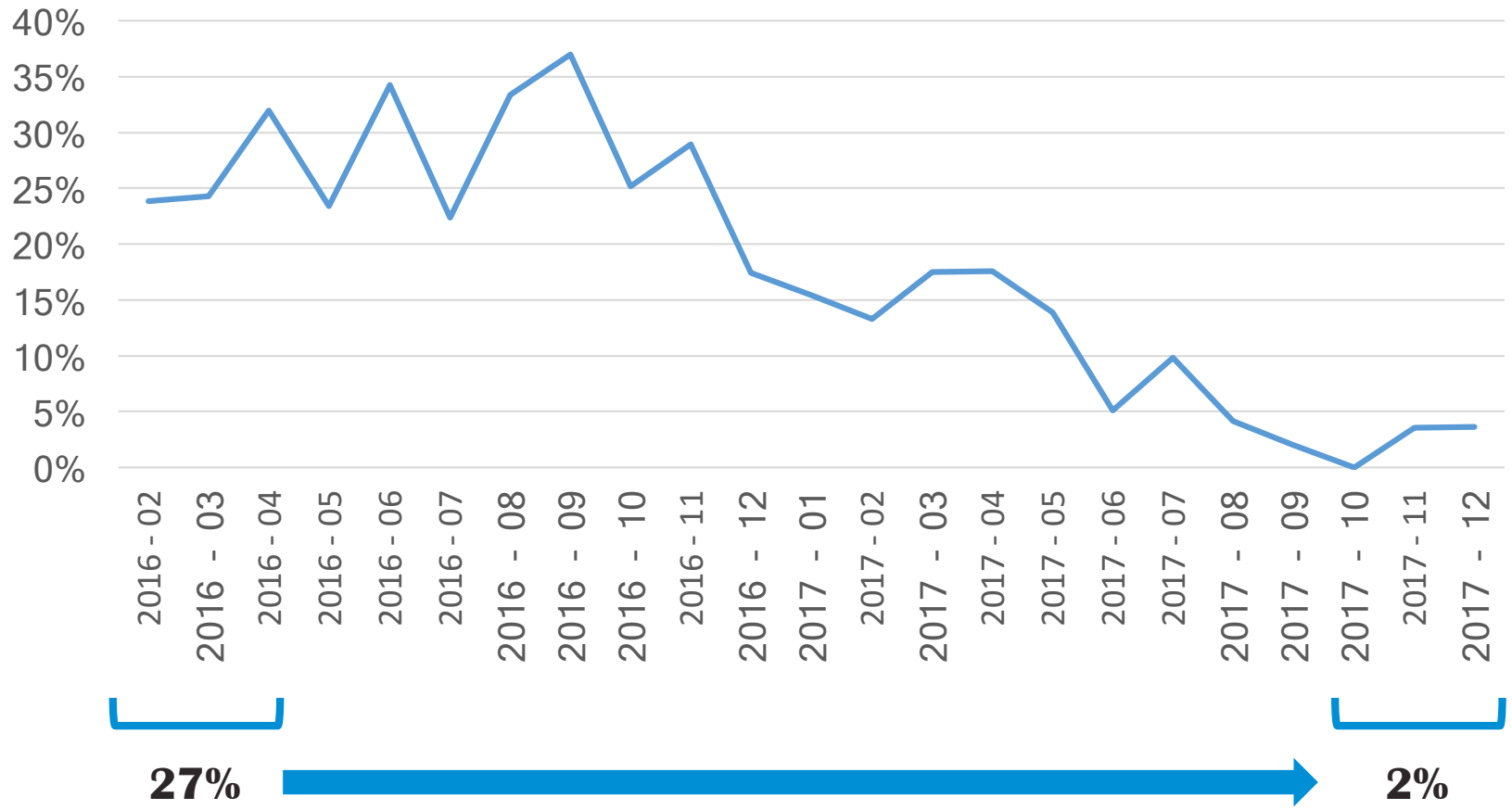
UCL

Dr Katarina Wahlström

It made me more confident!

Got us to a new level

Potentially clinically relevant discrepancies



91%

Potentially clinically relevant discrepancies reduced by

91%

Benefits of higher quality in network

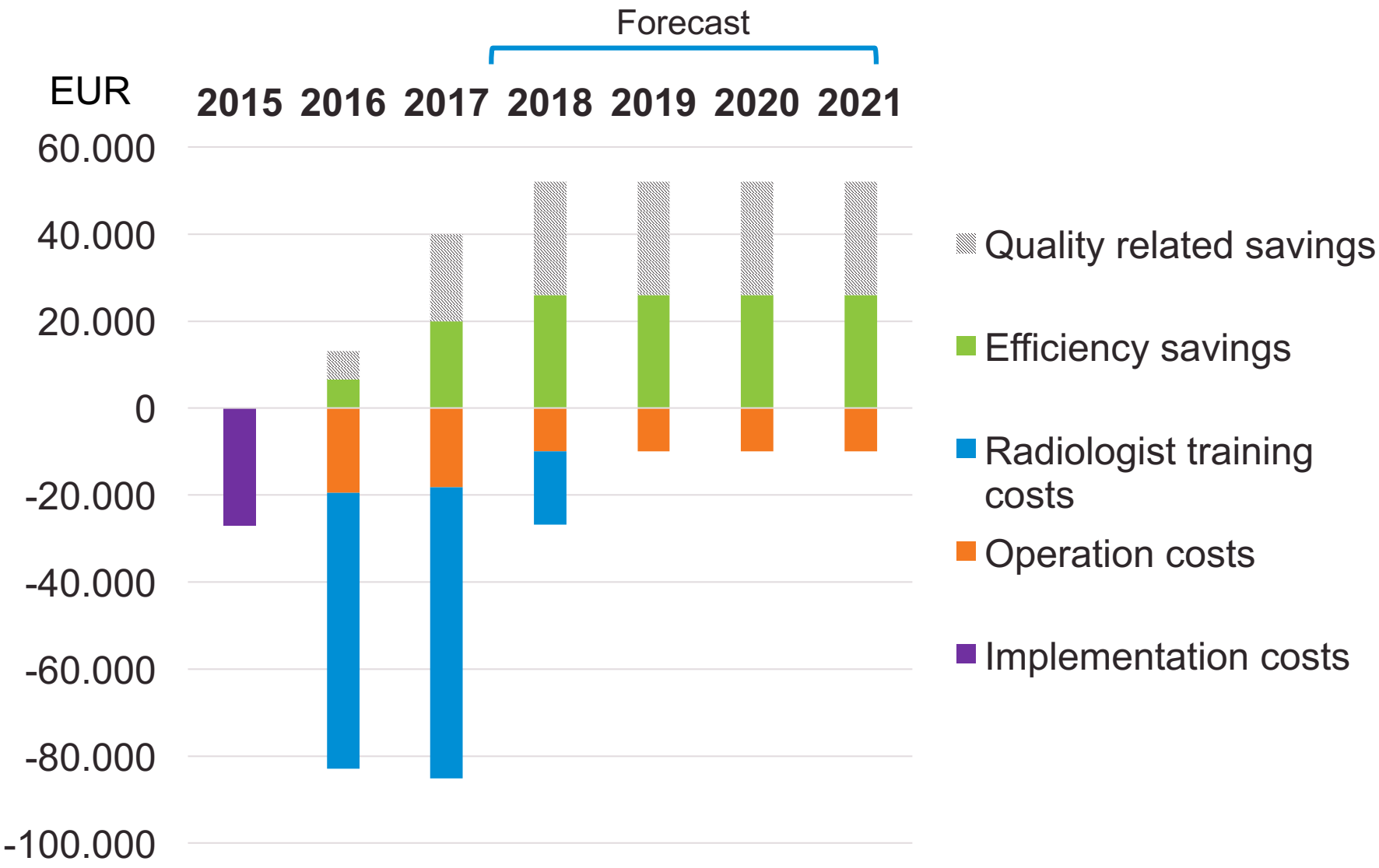
Same quality across sites

Reduced length of stay

Fewer unnecessary scans

Less delay

Patient outcomes



Initial investment will pay off!

Summary

Diagnostic

Quality

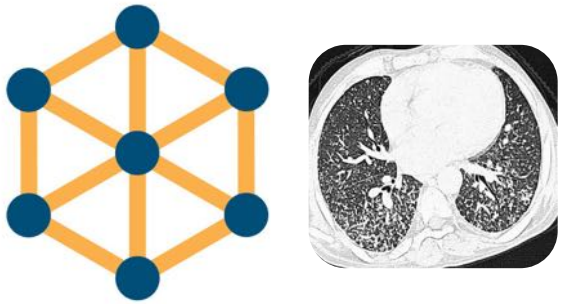
Capacity

Cost savings

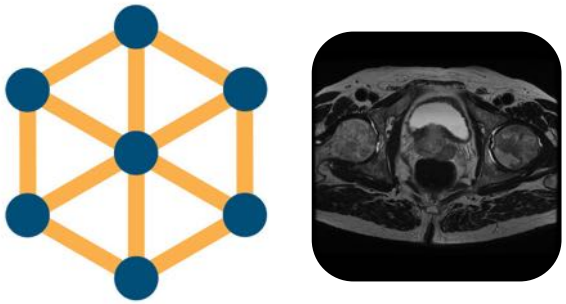
Now we are a more attractive workplace

Our radiologists now can become subspecialist experts in a mid-sized hospital

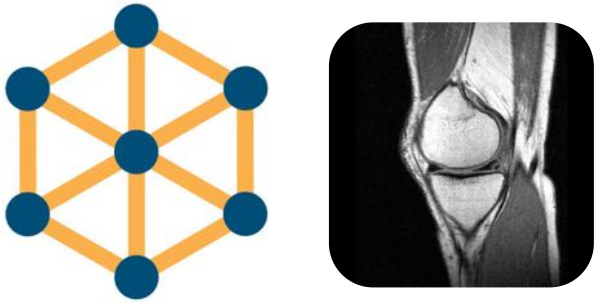
Expansion planned: new networks



HRCT



MR Prostate

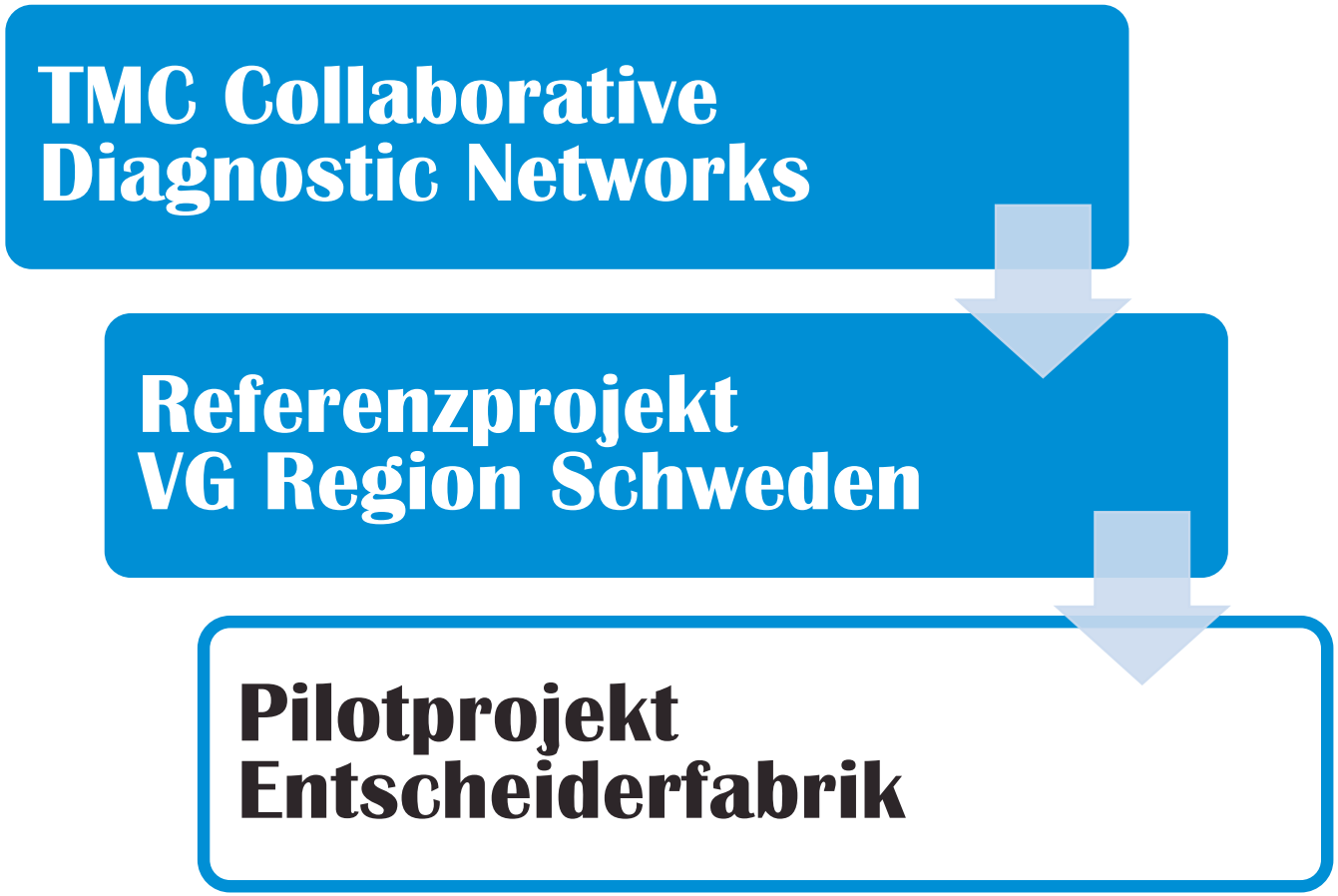


MR MSK

Success factor

One hospital took full responsibility

Leadership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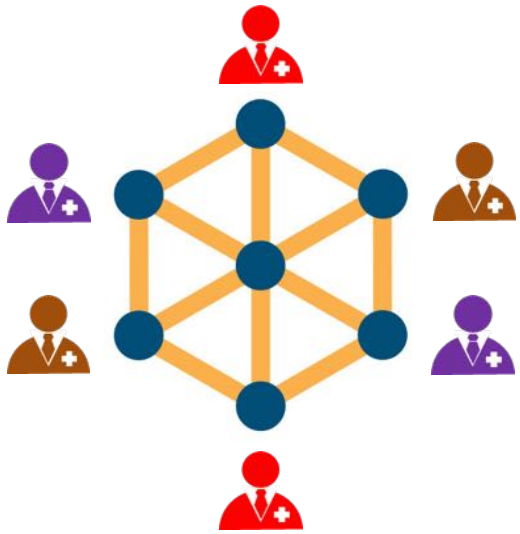
Pilotprojekt
Entscheiderfabrik

Pilotprojekt Entscheiderfabrik

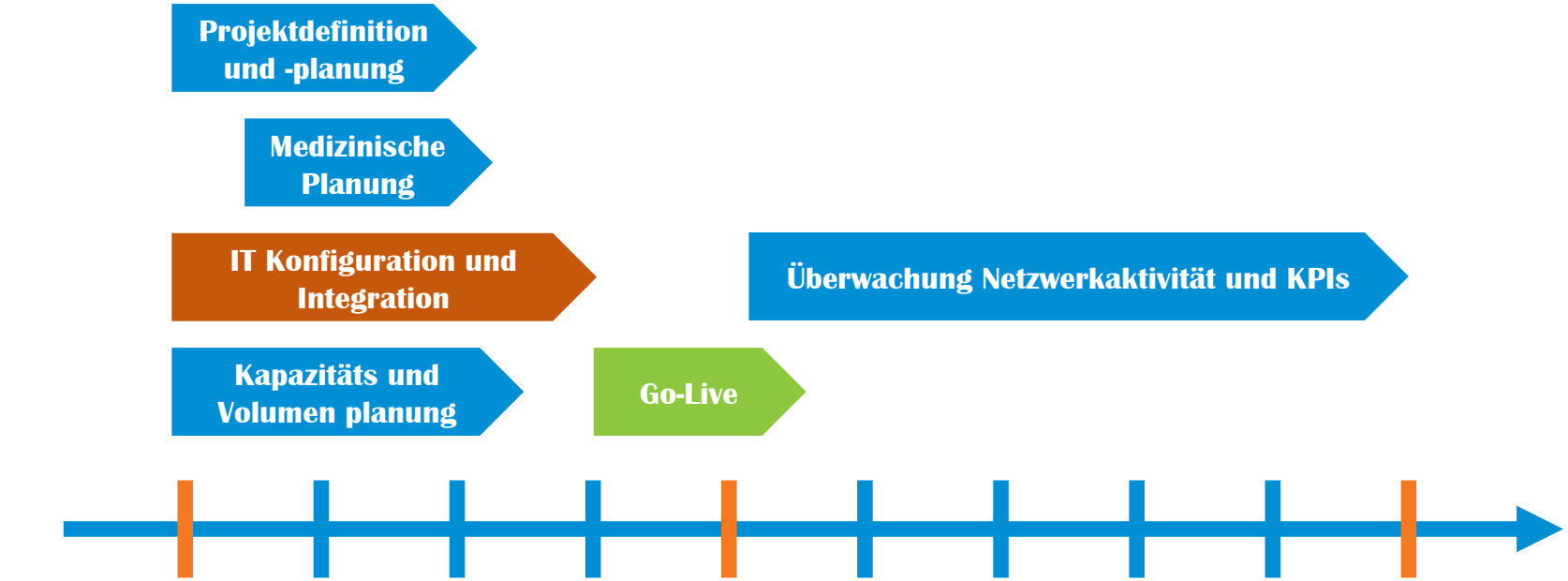
Zweitmeinungsnetzwerk

Automatische Zuweisung an geeignetsten Experten



Professionelle Verwaltung des Netzwerks

Zweitbefundungssystem: wertvoll für Weiterbildung



Feb 2018
Entscheider-Event

ENTSCHEIDERFABRIK

Jun 2018
Sommercamp

ENTSCHEIDERFABRIK

Nov 2018

MEDICA®

Netzwerk-Management

Aktivitätsplanung Netzwerk

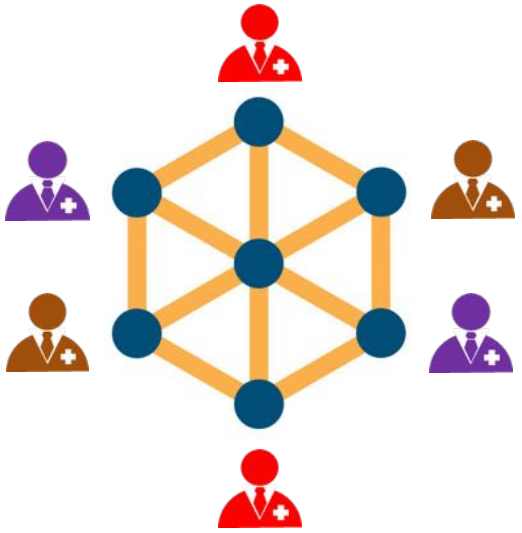
Präsentation der finalen Resultate:

- **Aktivität**
- **Qualität**

Ausbaumöglichkeit

Zentraler Bereitschaftsdienst: Notfallradiologie

Erstbefundung im Spezialistennetzwerk



Genehmigung Teleradiologie nach RöV

Wir suchen 2 Krankenhauspartner die an Vernetzung interessiert sind

TMC

Richtige Diagnose

Erfolgreiche Behandlung

Appendix

Rechtlich:
Zweitmeinungsnetzwerk

§

Fachärzte vor Ort an allen Standorten für Stellung rechtfertigende Indikation

Reine Zweitmeinung

Rechtlich: Erstbefundungsnetzwerk innerhalb der Regelarbeitszeit

§

Teleradiologie nach Röntgenverordnung

Nachgewiesener Bedarf für Kapazität

Rechtlich: Zentraler Bereitschaftsdienst Notfallradiologie – Außerhalb der Regelarbeitszeit

§

Teleradiologie nach Röntgenverordnung

Regionalprinzip

Cost savings through efficiency gain

Case volumes 2017	1100
Average reading cost per case	60 EUR
Previous reading cost	66,000 EUR
Reporting efficiency increase	65%
New reading cost	40,000 EUR
Yearly cost savings	26,000 EUR

$$Reporting\ efficiency = \frac{Complexity\ of\ case\ type_{constant}}{Reporting\ time}$$

$$Reporting\ efficiency_{new} = Reporting\ efficiency_{old} \times (1 + Efficiency\ gain)$$

$$\frac{Complexity\ of\ case\ type_{constant}}{Reporting\ time_{new}} = \frac{Complexity\ of\ case\ type_{constant}}{Reporting\ time_{old}} \times (1 + Efficiency\ gain)$$

$$Reporting\ time_{new} = \frac{Reporting\ time_{old}}{1 + Efficiency\ gain}$$

$$Reporting\ cost = Salary\ factor_{constant} \times Reporting\ time$$

$$Reporting\ cost_{new} = \frac{Reporting\ cost_{old}}{1 + Efficiency\ gain}$$

Average efficiency gain in given year	
2016	11%
2017	43%

VGR beginnt Zweitbefundung selber zu übernehmen