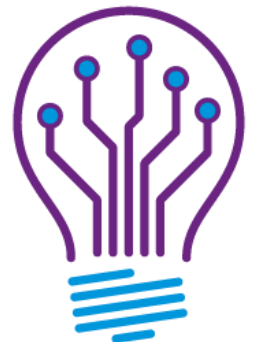


Scottish Radiology Transformation Programme



Supporting the delivery of a world class,
person-centred sustainable radiology service
that continually improves the health and
wellbeing of the people of Scotland.

Clinton Heseltine, Clinical Lead
Amy Currie, Project Manager



S RTP Team: Clinical



Dr Hamish McRitchie
S RTP Medical Director



Dr Shalini Datta
Clinical Lead
SNRRS Other Opportunities



Dr Raj Burgul
Clinical Lead
National Data



Dr Mark Hall
Clinical Lead
Artificial Intelligence



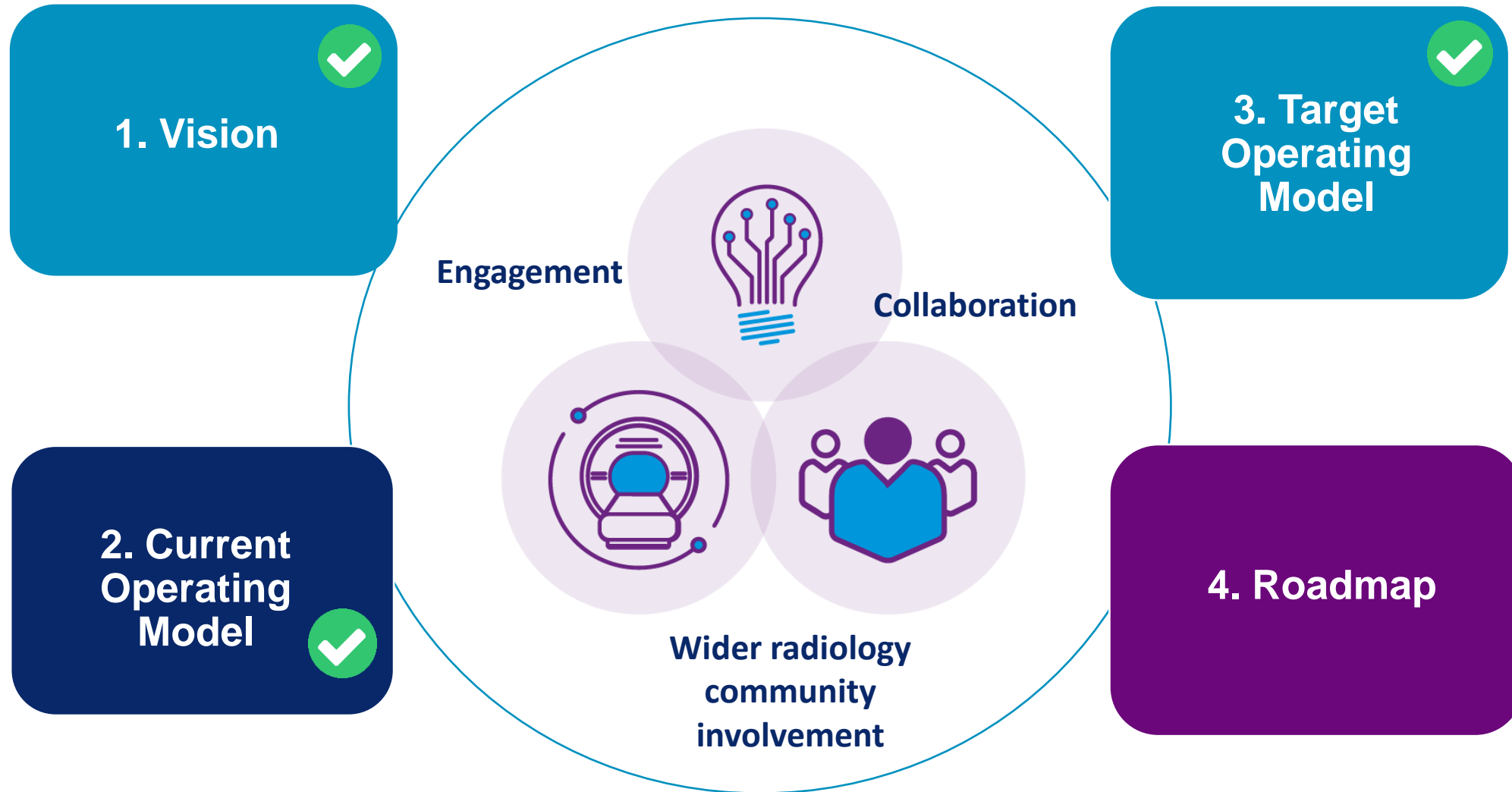
Dr Simon McGurk
Steering Group Chair
Advancing Practice



Clinton Heseltine
Clinical Lead
Advancing Practice &
Workforce Planning

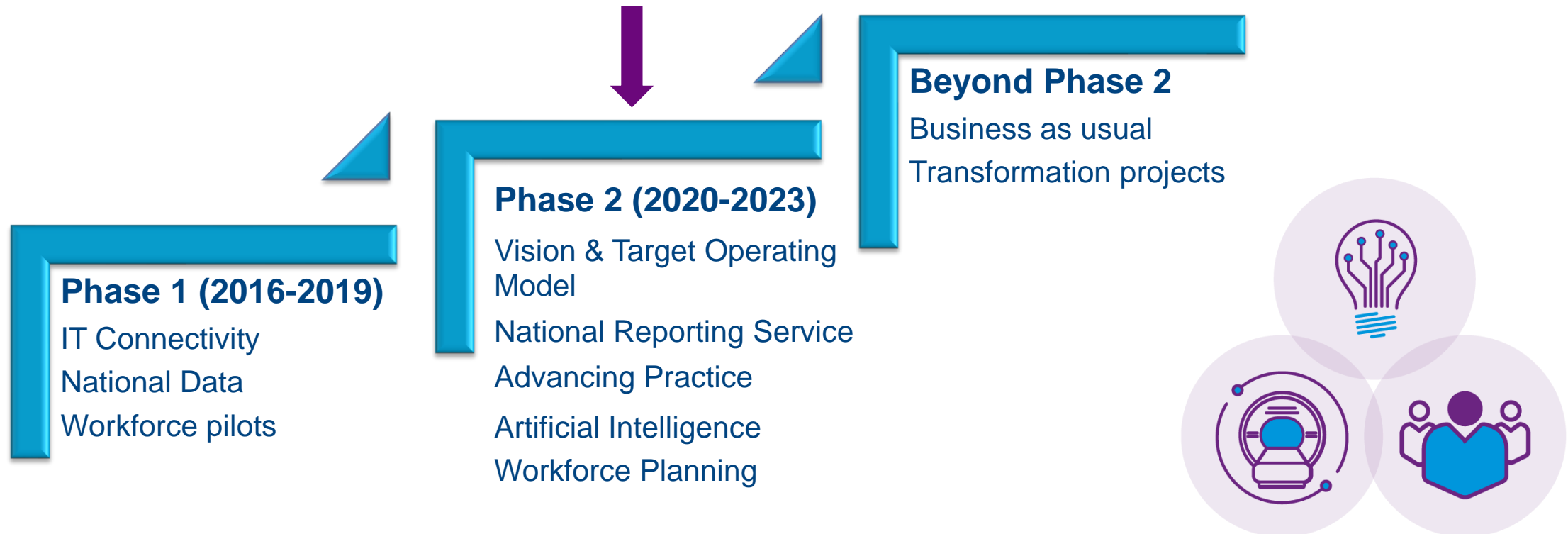
+ a number of project Workstream Leads

Vision and Target Operating Model

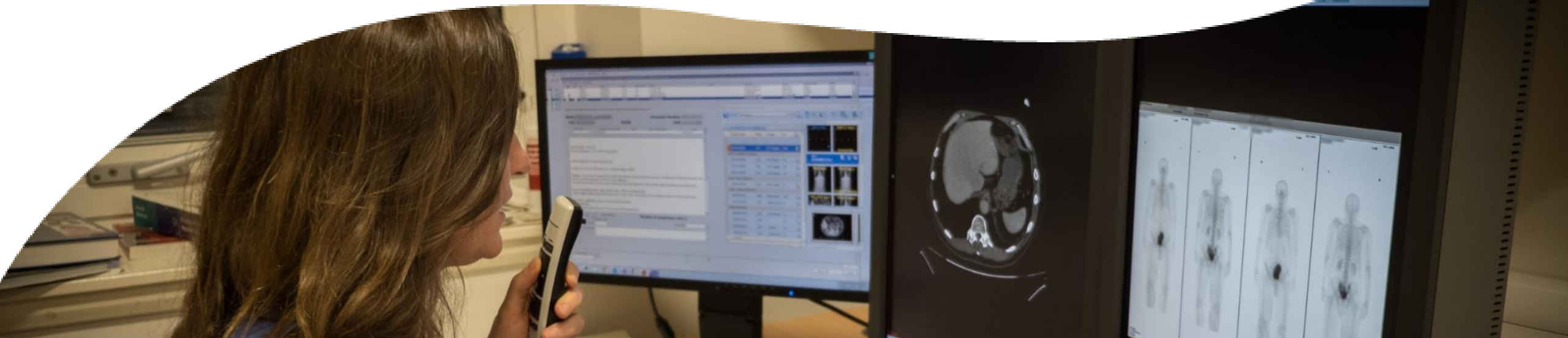


Transforming Radiology Services

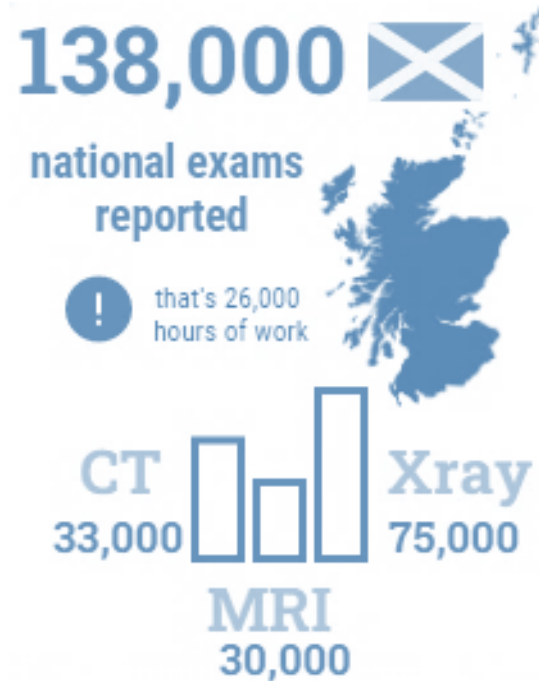
- The Programme is looking at areas spanning workforce, technology & innovation and service models
- Phase One laid the foundations to support the delivery of the vision for Radiology in Scotland
- Phase Two is building on this



Scottish National Radiology Reporting Service (SNRRS)



Scottish National Reporting Bank Successes (July 2020 – April 2022)



£1.15m



cost avoidance for radiology departments

99%

exams reported within 5 working days






12 health boards actively donating exams

Ayrshire and Arran
Dumfries & Galloway
Forth Valley
Golden Jubilee
Grampian
Greater Glasgow and Clyde
Lanarkshire
Highland Argyll & Bute
Highland North
Shetland
Tayside
Western Isles

donating board satisfaction

90%

-  SNRRS team interactions
-  type & quantity of exams that can be reported
-  cost of exams



70

home workstations deployed to consultant radiologists



82

consultant radiologists across NHS Scotland working for SNRRS



9/10

consultant radiologists are satisfied with their experience with the SNRRS

What's Next for the SNRRS?

Expanding the scope of the SNRRS by:

- Exploring recruitment of **reporting radiographers** to the SNRRS Bank under AfC rates
- Exploring a simplified process for recruitment of **retired radiologists**
- Exploring **radiology reporting networks**
- Exploring options for future funding and ownership of SNRRS workstations.



Artificial Intelligence



Artificial Intelligence

Aim

With Artificial Intelligence (AI) becoming more prevalent in radiology, and with growing interest in this type of technology and its' potential, the aim of the AI project is to put in place a **structured, nationally co-ordinated approach** to help ensure **maximum benefit** and **avoid duplication of effort**.

Objectives



To set up a national AI group for radiology in Scotland

To identify the clinical areas where AI might deliver best value

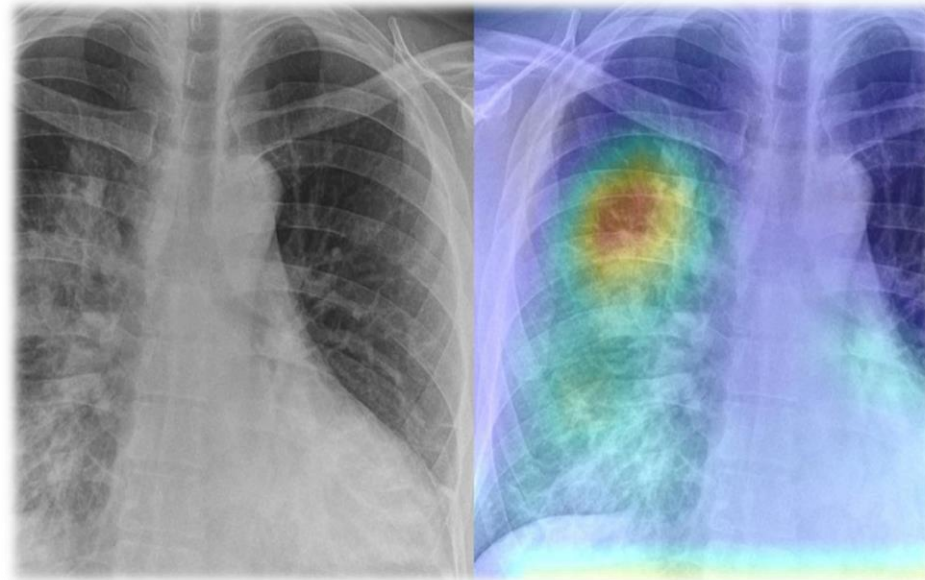
To identify the potential challenges and constraints of AI

To investigate how AI could help address service demand and capacity issues

AI – Current Examples



Detection of Osteoporosis



Chest X-Ray Assessment

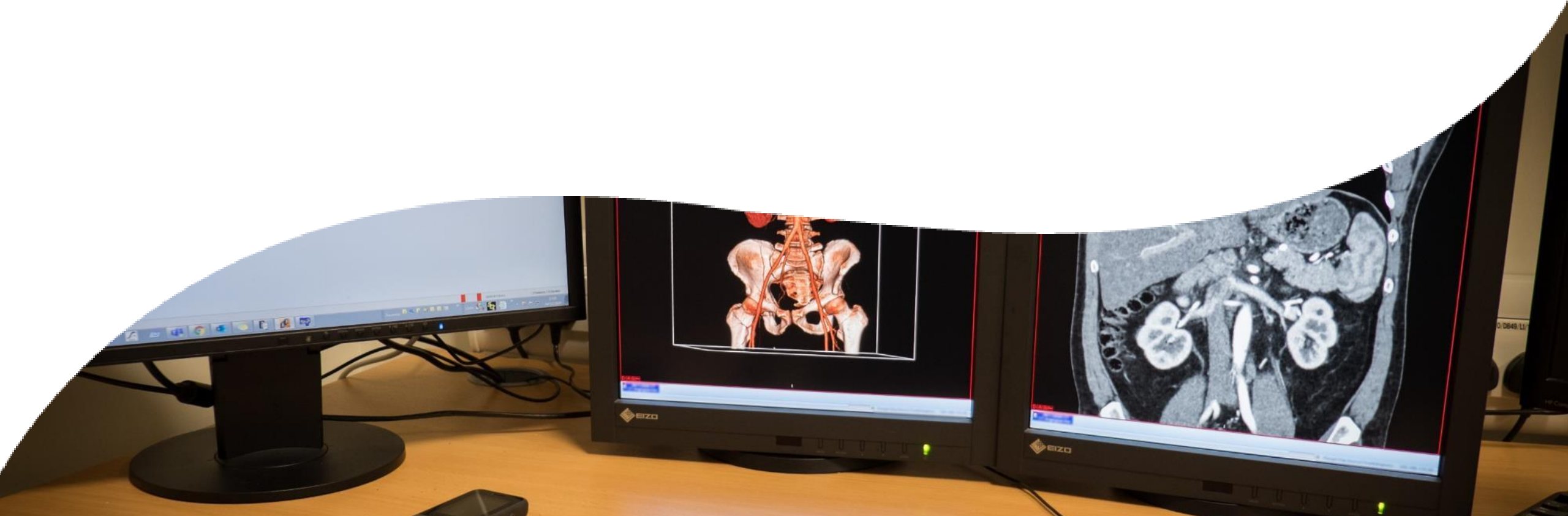


Key Focus for the AI Project

- Maintain **National AI Register** for Radiology
- AI **Strategy** for Radiology in Scotland to be developed detailing a **national approach to evaluate and deploy** Imaging AI solutions across Scotland
- Development of **AI Deployment Toolkit** containing relevant checklists, frameworks and templates required to evaluate and deploy AI solutions
- Continue to explore **Pilots & Clinical Trials** that are aligned with Radiology Needs



Advancing Practice



Advancing Practice Workstreams



The aim of the Advancing Practice project is to **increase capacity in the radiology service by expanding and optimising the capability and expertise** of various roles in the radiology team.

Workforce Planning

Assistant Practitioner & Reporting Radiographer Training

Assistant Practitioners

- Increase numbers ✓
- Extend Scope of Practice ✓
- National Job Descriptions
- Assistant Practitioner Framework ✓
- Training & Development ✓

MSK

- Identify Pressures ✓
- Increase educational sessions
- Assess impact / inform future development
- MSK RR Training ✓

CXR ✓

- CXR RR Framework
- Remote mentoring pilot (includes utilising SNRRS Bank)
- CXR RR Training

US ✓

- National Job Descriptions
- Quality US Service Framework
- Sonographer Training
- US Academy

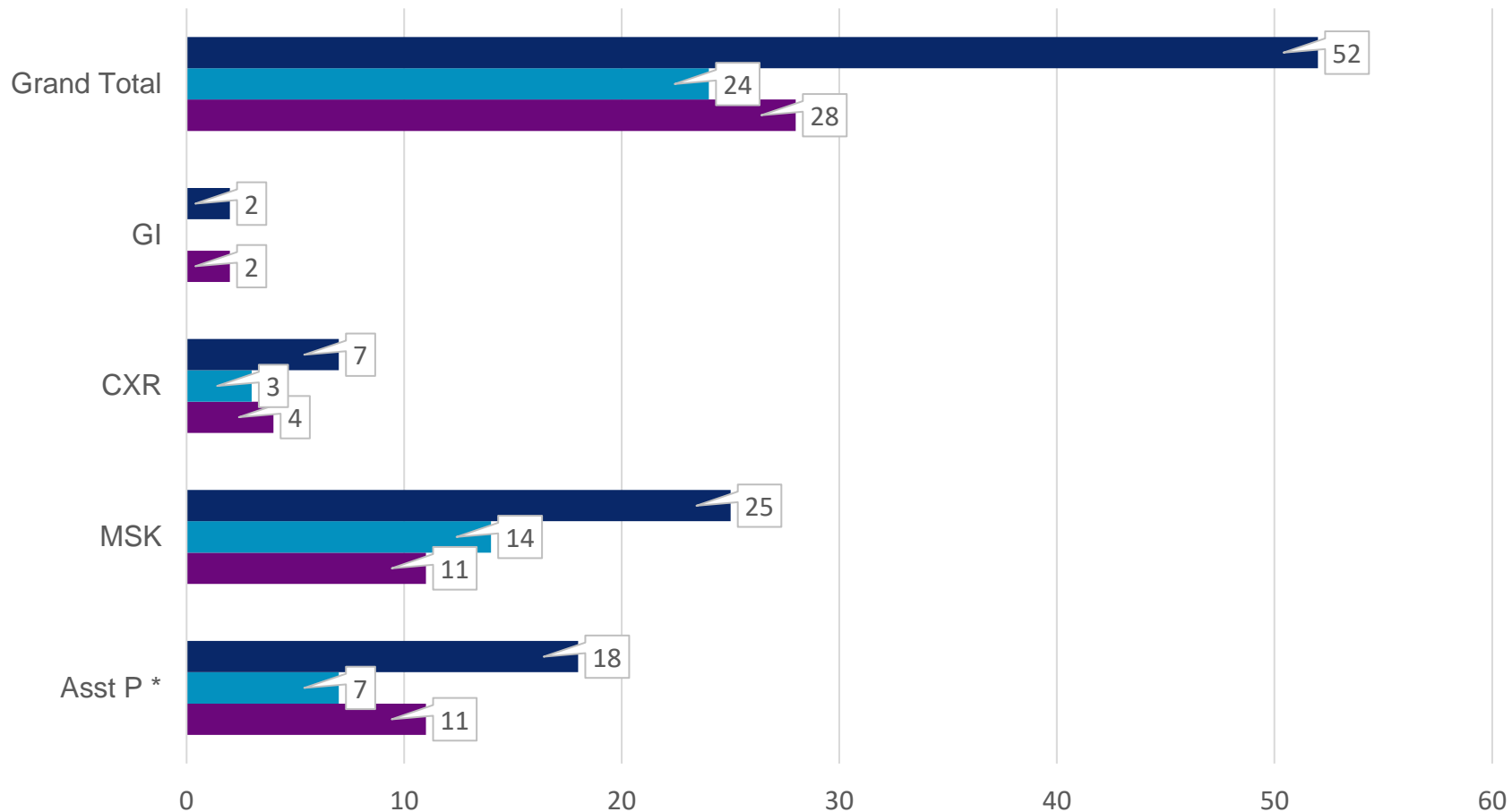
CT Colonography ✓

- CTC National Framework
- CTC Training Package

Advancing Practice Workstreams

Assistant Practitioner & Reporting Radiographer Training

* Includes SRTP & Recovery Plan funding



Reporting Radiographer training places have **exceeded** the Scottish Government's initial commitment of 30 by 2023

What's Next for Advancing Practice

Workforce Planning

Assistant Practitioner & Reporting Radiographer Training

Assistant Practitioners

- SCoR Accreditation
- National Job Descriptions
- Accredited Work Based Modules
- Routes to Radiographer
- APRONS
- Assess impact of AP role within service

MSK

- National educational sessions (Academy format) starting with **Rheumatology**
- Assess impact of RR training on service

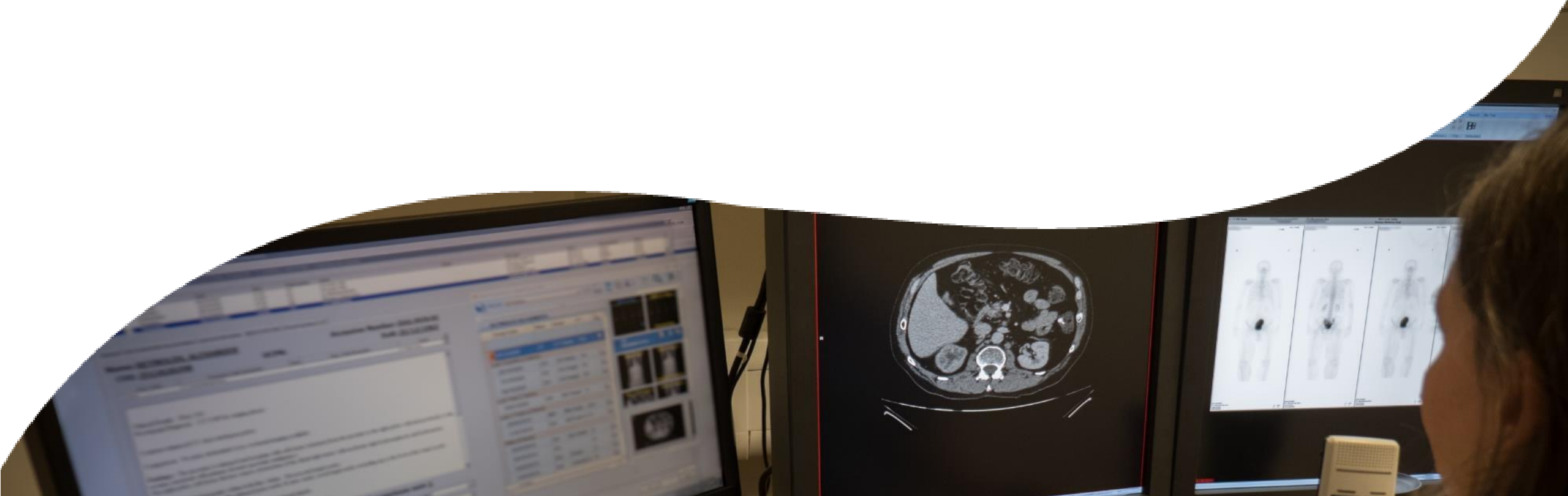
CXR

- CXR Mentoring Pilot assessment and future applications
- Assess impact of RR training on service

Routes into Radiography


- Placement options / challenges
- Existing and future numbers needed
- Undergraduate & Pre-Reg Inflow
- **In partnership with SoR:** Graduate apprenticeship with step-off & step-on options from SHCSW > Assistant Practitioner > Radiographer
- Assess value of Assistant Practitioner > Radiographer conversion courses

National Data




National Data


The aim of the National Data project is to **develop the supporting infrastructure** to ensure a **data driven service becomes a reality** by:

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Improving the
quality and
consistency of
data collected

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Making Data
Management
(collection and
organisation)
more sustainable

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Ensuring relevant
data insights are
available and
accessible.



Key achievements so far..

- **Data Output Priorities** agreed for 22/23:
 - ✓ - Workforce Planning
 - ✓ - Recovery Planning
 - ✓ - Service Insight Reporting
 - ✓ - Clinical Queries
- **14** Health Boards submitting data to NRIIP on a monthly basis
- **Focus on Data Quality** with **12/89** data items identified as a **priority** for data **quality improvement**
- **Top 5 codes** identified to be **nationally standardised**, with progress made to document standard operating procedures for each.
- **Successful evaluation** of radiology data dashboards – NRIIP and PACS
- Executive Board **endorsed recommendation** that work should continue to **enhance** existing NHS Scotland Hosted NRIIP Dashboard with a **dedicated data management** and **analytical service**.



What's Next for National Data?

- An agreed national approach and phased implementation plan for **coding standardisation and mapping**
- **Data quality improvements**
- **Understanding of the current state of real-time data** at local Board level and a recommendation for how **good practice can be shared nationally**
- **Documenting the importance** of progressing **data quality & coding standardisation** and the **impact** it can have on the **future Radiology Service**



Workforce Planning



Workforce Planning



Deliver a **national workforce plan** for the radiology service in Scotland by March 2023

- Based on **data** and **professional judgement**
- Using the recognised **Six Steps** approach
service model > demand and supply > gap analysis > solutions >> implement
- High-level **first iteration** for diagnostic imaging on a national scale
- Building on the recent Radiology Service Target Operating Model
- Close **collaboration** essential (*Engagement Events 21 – 23 November 2022*)

Step 1:
Define the Plan

Step 2:
Map Service Change

Step 3:
Workforce Required

Step 4:
Workforce Supply

Step 5:
Plan to Deliver

Step 6:
Implement, Monitor, Refresh

Data Process to calculate required workforce

By staff group, WTE



Staff Capacity

Hours available per WTE per year to report / acquire images

(accounting for PH, AL, sickness, study leave/CPD, other aspects of role)

Throughput

Reports /hr per WTE
Exams /hr per WTE
(average figures, per modality)

Metrics for work split and skill mix

(e.g. Reporting Radiographer plain film volume)

Demand

Exam Requests projected per modality
(based on current activity and historical trends, modelling COVID backlog and future demand projections)

stress-test all variables (metrics and assumptions) and data model

=

Workforce Required

WTE per staff group required to meet projected Scotland demand
(scenario modelling, timescales 10 years +)



Gap Analysis



Solutions

Workforce Supply

Staff in Post
Vacancies

Imminent retireals
Current trainees

Projected future workforce if nothing were to change



Data Sources to calculate required workforce

By staff group, WTE



Staff Capacity

NES / SNRRS Bank
Radiologist job plans,
standard holiday allowance,
sickness etc

Assumptions / Modelling
Working capacity split for
proxy measures (*by role, by
AfC band*)

Throughput

RCR / SNRRS Bank
Radiologists & Reporting
Radiographers

2021 US Paper
Sonographers

Local Sampling Data
Radiographers

Assumptions / Modelling
Skill mix, work split

Demand

NRIIP (RIS Data)
Exam requests, by Board, all
Scotland (April 2017 – March
2022)

Future Projections
Historic trends, NHS England
modelling

Assumptions / Modelling
Missing COVID activity,
modality projections

=

- ✓ **Stress-Test Variables**
- ✓ **Validate**
(Critically Important Variables,
Assumptions, Data Sources)
- ✓ **Scenario Modelling**

Workforce Required

Gap Analysis

Projected workforce requirements vs.
projected workforce supply

Solutions

Workforce Supply

NES Clinical Radiologists, Diagnostic Radiographers (*by AfC band*)

RCR Census Interventional Radiologists

2021 US Paper / Assumptions Sonographers

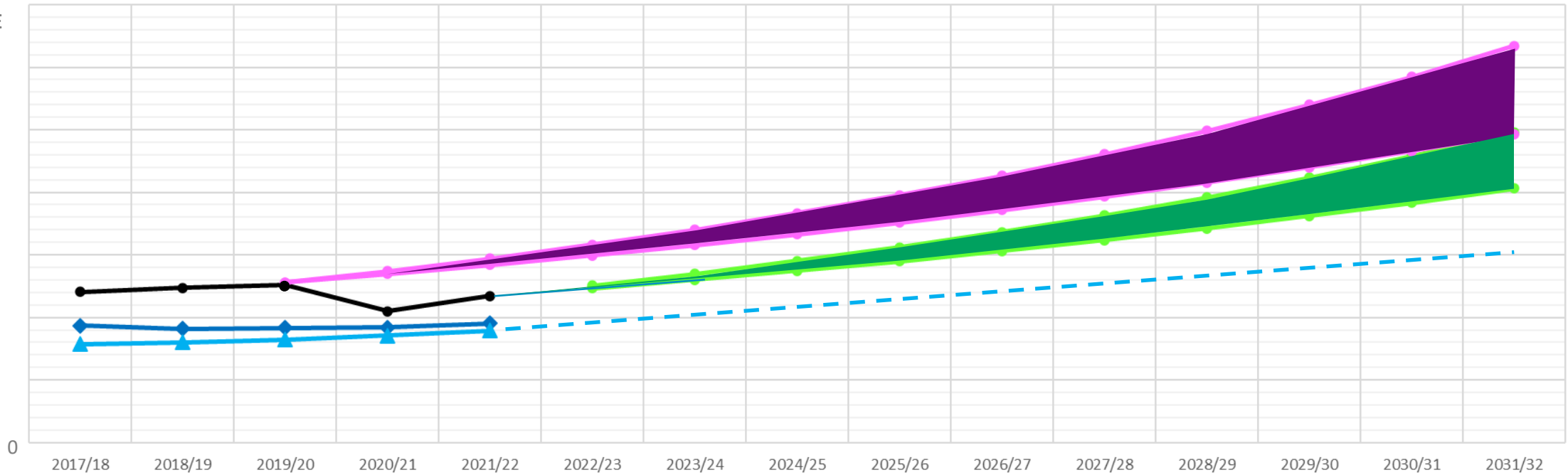
Assumptions / Modelling Workforce split, Imminent retireals

➤

Example Data Model Output

By Staff Group

WTE



Staff In Post (WTE)

Staff supply expected if no change (WTE)

Staff required to meet projected demand (not COVID-adjusted)

Establishment (WTE)

Staff required to meet actual demand (NRIIP exam requests activity)

Staff required to meet projected demand (COVID-adjusted)

Exploring Imaging Recommendations

The Five Pillars of the Workforce Journey (National Workforce Strategy)



Plan

How can we support local/regional imaging workforce planning?

How can we get better data?

What tools are available / could be developed to support planning?

How can AI / emerging technology support our workforce challenges?

Attract

How can we recruit competitively?

From within Scotland / Rest of UK / Internationally?

How can we recruit more successfully to remote and rural areas?

Train

How can we improve the pathway from Band 2 to Band 5?

How could training be redesigned to reduce blockers and increase retention?

How can we sustainably increase training place numbers?

How can we utilise the NHS Academy?

What new skills / capabilities should we be developing?

Employ

What opportunities are there for incentivisation?

What could be done nationally 'Once for Scotland' to support filling vacancies, increasing establishment, allowing for more flexible working?

What impact will recent / proposed policy changes to immigration have on workforce?

Nurture

How can we support 'time to train' in departments?

How can we support IR/QA/H&S duties?

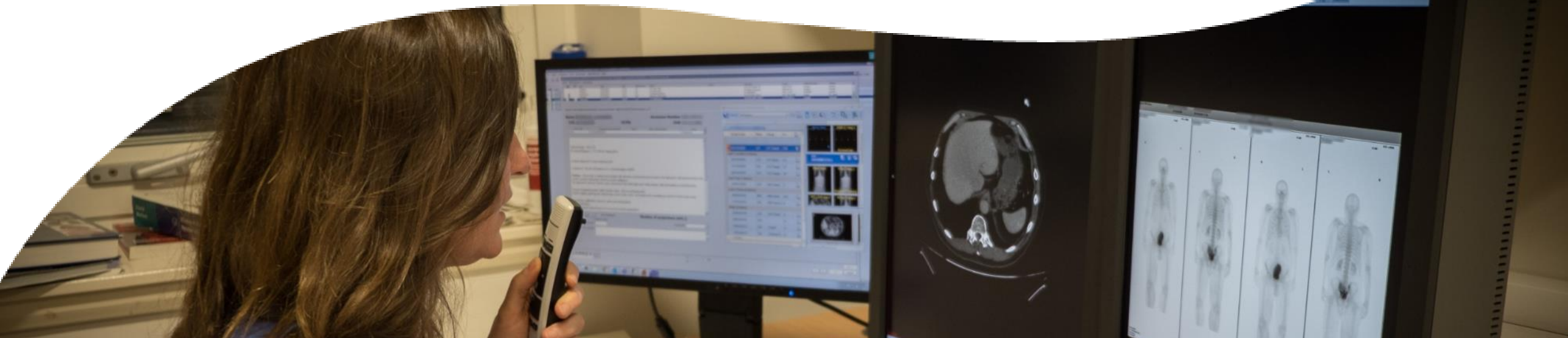
What impact will the Safety Act have? (Health and Care (Staffing) (Scotland) Act 2019)

How can we contribute to staff wellbeing, culture and leadership?

How can we support Flying Finish?

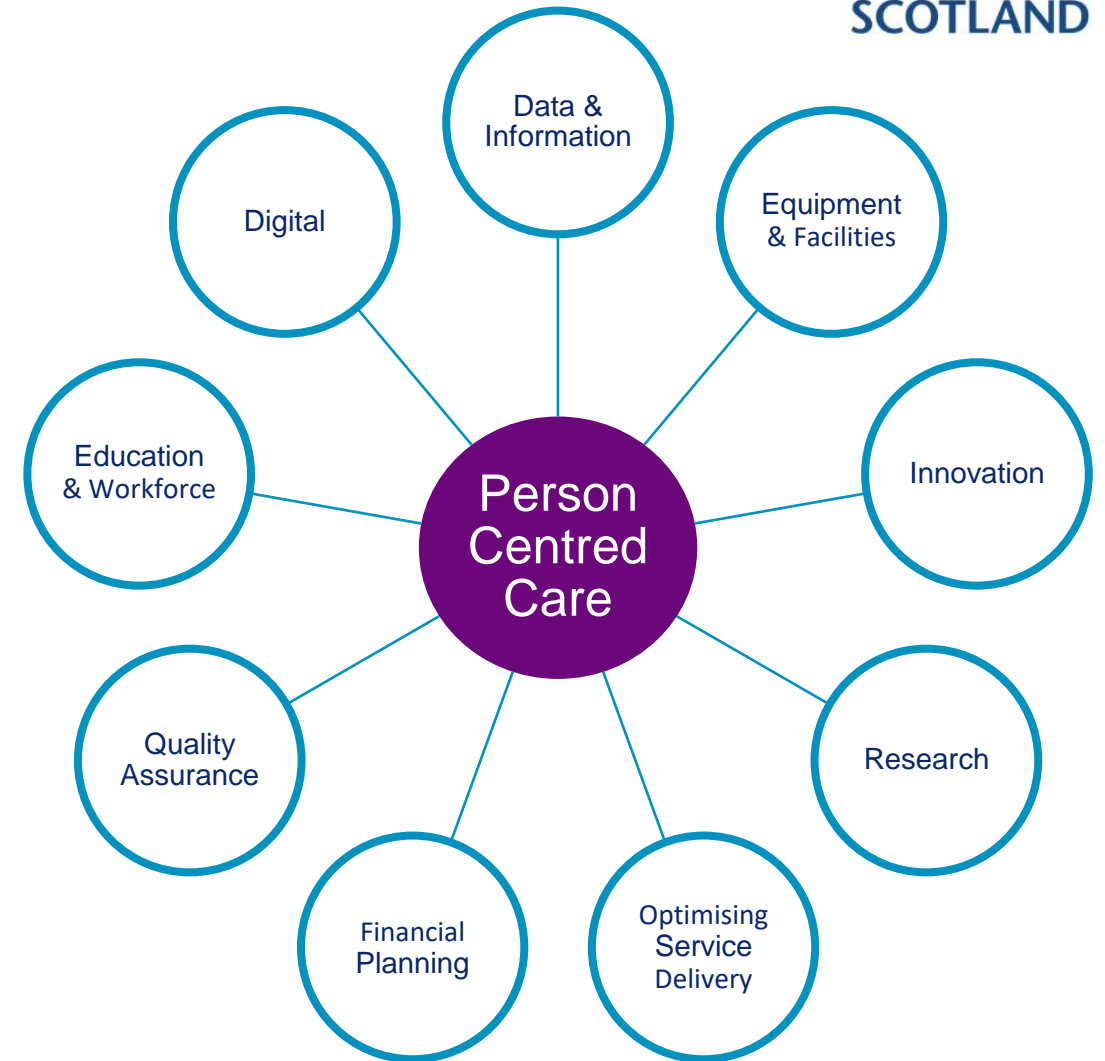
Diagnostics Strategic Network

Future of the SRTP



Diagnosics Strategic Network Incorporation of SRTP Work

- Scottish Government are developing a **Diagnosics Framework** for Scotland, due for consultation March 2023
- Approval in principle from NHS Board of Chief Executives, work underway to establish structure and delivery priorities
- Potential facets identified and some initial mapping work carried out for Imaging, including the mapping of SRTP projects into the Strategic Network (*SRTP is funded until the end of this financial year*)



Any Questions?

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