User research findings

Digital Capabilities Framework (DCF)

User and stakeholder needs and personas

10 February to 31 March 2025

Research goals

Aim: to understand how the DCF is used, capturing its strengths and pain points and translating research findings into actionable insight for future development

Goal: ensure the DCF continues to meet its users' needs and provides value to the NHS

Research current users and needs

Mixed methods user research with DCF end users and wider stakeholders

Themed analysis and synthesis

Analysis and synthesis to uncover unmet user needs, pain points and gaps

Wider strategic alignment

Requirements, dependencies and potential for DCF to become a critical enabler for other programmes

Digital platform functionality and performance

Areas where performance, accessibility and user experience could be improved

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Research approach

Primary research

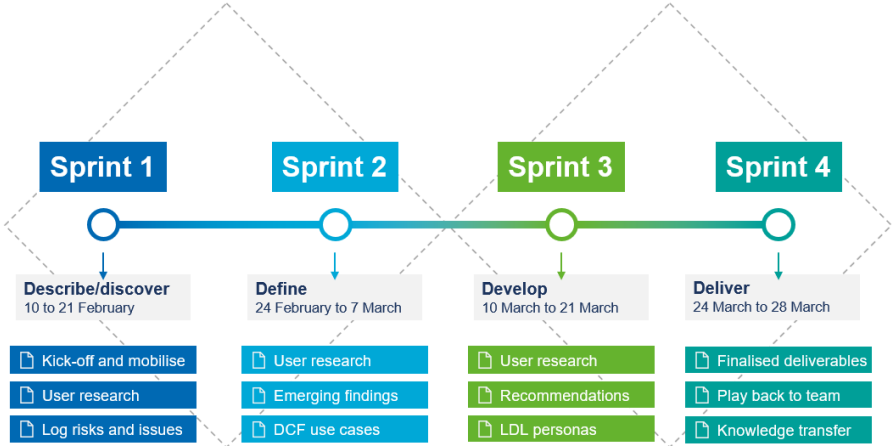
- Depth interviews *(19 interviews involving 31 participants)*
- Covering: *Maternity, Standards, Community, Connecting care, Procurement, Frontline digitisation*
- *17 end users, 1 end user/stakeholder, 13 stakeholders*

Analysis & synthesis

- In-depth thematic analysis of transcripts
- Affinity mapping and grouping
- Identification of actionable insights for recommendations

Findings and recommendations

- Full discovery report 31 March 2025
- Summary playback 3 April 2025 (to accommodate DCF team leave)



Research limitations

Themes identified had a high level of congruency and consensus, giving confidence that common user needs were well captured. However, due to the 8-week timeframe which included a half term, participants were recruited via existing networks, meaning:

Stakeholders were over-represented compared to end users

Many stakeholder participants were actively or previously involved in developing DCF and/or its products. Most were digital leaders. Relatively few stakeholders had limited or no knowledge of DCF.

Recommendation: in future, use a stratified sampling approach to recruit participants and focus predominantly on end users.

New users (and new types of user) were under-represented

Most participants were familiar with the DCF but relatively few had only recently started to use it. Potential and/or recently emerging DCF user groups within the NHS workforce may not be represented at all.

Recommendation: in future, use comms channels and links on the DCF sites to recruit a wider, and potentially more representative, sample.

To provide value to the NHS, the DCF needs to be…

Usable

DCF should be easy for anyone to find and navigate.

If it isn't usable…
DCF won't reach the people it should. Poor usability risks failure demand, eg avoidable contacts and need for guidance and training

Current pain points
Having to log in, mix of platforms/UX, inconsistent, confusing language and terminology, generic name and acronym, hard to find DCF in organic searches, inaccessibility, unintuitive structure and information architecture

Useful

DCF's purpose and use cases should be clear

If it isn't useful…
People will see DCF as an irrelevance, rather than a tool to help them complete tasks and drive improvement and excellence

Current pain points
Lack of task-focused guidance for specific use cases in procurement, benchmarking and system improvement, products are not designed to meet specific user needs and must be adapted, inclusion of DCF into DMA did not seem to have a purpose and created significant burden

Up-to-date

DCF should be an up-to-date framework

If it isn't up-to-date…
DCF will become less trusted (and used) if it does not represent today's EPR capability or use cases

Current pain points
Suppliers and Trusts both feel that DCF has not evolved or iterated, gaps in 'core' capability, unclear what 'innovation' and 'transformation' now means, lack of versioning and history

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DCF needs to *be*

usable

…which could also make it more **useful**

Usable Useful

People value the DCF and recognise its importance

Like many useful products, DCF is often shared ‘organically’ – word of mouth, sending links. The Excel version is easy to share as a link, provided you can sign up to FutureNHS.

The Confluence version can be accessed anonymously and has more detail, but some users commented that it presents as documentation rather than a public-facing site.

Recommendation: make DCF fully open – no password needed – and accessible.

‘I think the principle behind the DCF is absolutely correct’

I desperately urge you… not to throw the baby out with the bath water on this one. There's some really fundamentally sound work in the background of [the DCF].

‘We actually need these foundations, like the digital capabilities framework to actually do our job better to improve services so that women and babies are healthy’

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Usable Useful

DCF's purpose isn't immediately clear

The DCF's name doesn't give users a sense of its purpose. Even people actively involved with developing DCF's products are not always sure what it is designed to do.

People now use the DCF to support a range of activities it was never specifically designed for. This is a major cause of pain points, frustration and confusion uncovered in the research.

Recommendation: Create clear guidance on DCF's purpose. Consider renaming it (although this may be risky given it is well established).

'Nobody ever described [the DCF] to the NHS…In meetings with stakeholders, nobody ever said this is the product and this is what we use the product for and that's what you're going to help develop'

'It's not supported by explanatory notes, so it's misinterpreted an awful lot'

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The various DCF products and categories aren’t well understood.

Some people felt that certain capabilities did not belong in certain products and/or categories. Terminology is often specific to business analysis, eg ‘non-functional requirements’ which not everyone understands.

Recommendation: review taxonomy, consider replacing with an ontological (real-world based) approach, designed and tested with end users

‘DCF has limited usefulness as it is not clear why some capabilities are there and others weren't’

‘from a usability perspective there might be confusion for people who are not familiar with the DCF in terms of *what am I supposed to be looking at here?*’

‘I was a little bit confused… because I think when you first did it, you didn't have maternity. So I was looking in community for my community midwives’

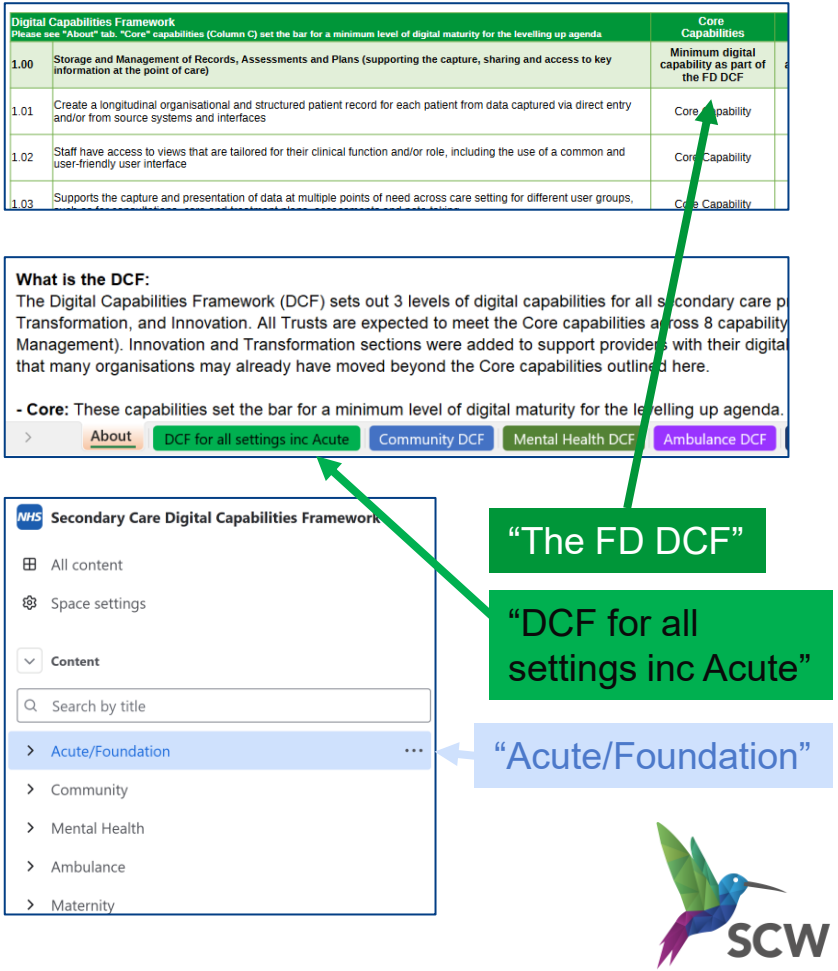
Language is inconsistent.

Throughout the research, a recurring theme was participants' confusion between names, acronyms, terms, products, concepts.

The DCF's language is not internally consistent: for example, 'Acute/Foundation', 'DCF for all settings inc Acute' and 'the FD DCF'.

More widely, is it a '*requirement*' or a '*capability*'? Is it '*digital maturity*' or '*capability*'? Is DCF a framework for a Trust's *digital systems* or *EPR*?

Recommendation: Resolve inconsistent language in labelling and guidance.



Different people need different levels of detail

Broad definitions allow flexible interpretation and can lead to differences of opinion (between supplier and NHS) which are hard to resolve.

Recommendations: simple, clear navigation that allows people to drill down to the level of detail they need. Improve guidance.

‘These DCF items did start off as a whole paragraph and did get paired back to a single line for clarity. So it was clear and easy to use. But it's only clear and easy to use if you understand what lies behind. Some of it is very straightforward and some of it is not.’

‘It would be nice if things were a bit more in depth, and I understand you don't want the DCF to balloon, but [it would help] if there were a couple more links to documentation where it is more in depth’

People's view of DCF depends on whether they use Excel or Confluence

Some Excel users felt DCF held insufficient detail to determine if a supplier could deliver a capability, or for suppliers to build towards.

Others, looking at Confluence, viewed DCF as too detailed and not for everyone.

Recommendations: Bring core capabilities to the fore. Distinguish between the DCF itself and derived products that support specific use cases.

> 'One of the big things that we need to think about in terms of how do we actually properly dissect the requirements so it's understood… I'm not seeing Confluence so that might exist already, but I'm not aware of it.'

> 'There is no reason why there couldn't be a link through from the question. So a separate page that gives you that additional understanding of that level of information that you might need

> 'I guess again the main concern about Confluence is that it's not designed for the public. It's not a fully accessible website...'

Navigating your way around DCF isn't intuitive

There is a large amount of information in the DCF, but it is not organised in a way that makes sense to people. For example, categories, tags, grouping, key words, searchability.

This is also true for the FutureNHS EPR Support Hub, for many users an entry point to DCF.

Recommendation: create a logical information architecture and, potentially, a filtered search function that supports people to find the information they need.

'DCF is unclear in how things are presented'

'Confluence is not designed for that kind of, you know, way to filter down what you're looking for.'

'I could see that there was opportunities there to maybe group things better. Perhaps introduce a taxonomy in future'

'There has to be some grouping, some simplification to make sure it's understandable to people'

Usable

DCF has a findability problem

People tend to access DCF through saved or shared links to the Excel file on FutureNHS. People who didn't know about DCF were unsure where they would have looked for it.

FutureNHS is not open to everyone. Confluence is more open, but neither accessible nor sufficiently visible to search engines (its domain* is technical and hard to remember)

Recommendation: re-platform the Confluence content onto an accessible public-facing NHS website, structured around users' needs

'Because we didn't know the name DCF, we would have been looking for search terms like SNOMED requirements on the main NHSE website.'

'As a Confluence site it has certain restrictions in terms of accessibility, in terms of findability'

'It's actually quite hard to find on the Internet. I find I can't just Google Maternity DCF because it doesn't, you know, nothing comes up'

*https://nhse-dsic.atlassian.net/wiki/spaces/SCCP/pages/12360024083/Acute+Foundation

DCF needs to be

useful

Use case: Procurement

Use case: Benchmarking

Use case: Improvement

Use cases

Use case: Procurement

The original use case of the DCF, tasks it supports include:

1. Pre-procurement discussions
2. Evaluating suppliers
3. Product demos
4. Procuring an EPR
5. Migrating EPRs

- Capabilities common to all
- Comprehensive coverage
- Can hold people to account

Use case: Benchmarking

Use of DCF in DMA has led DCF to be viewed as a method of benchmarking for future maturity assessments.

'The DCF was never meant to be a measurement tool for the NHS. Not to measure their digital capability'

- Alignment of DCF, DMA, HIMSS EMRAM
- Clear, unequivocal language
- Use granular language

Use case: Improvement

With benchmarking, the DCF becomes a useful structure to identify, plan and monitor areas that need improvement.

'[I] think it is a good use of the DCF in the planning cycle of continual system development and improvement.'

- Support action plans for improvement

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Useful

Use case: Procurement

Capabilities common to all

It’s essential in procurement to understand which system functionality is essential, and which differentiates one supplier’s product from another.

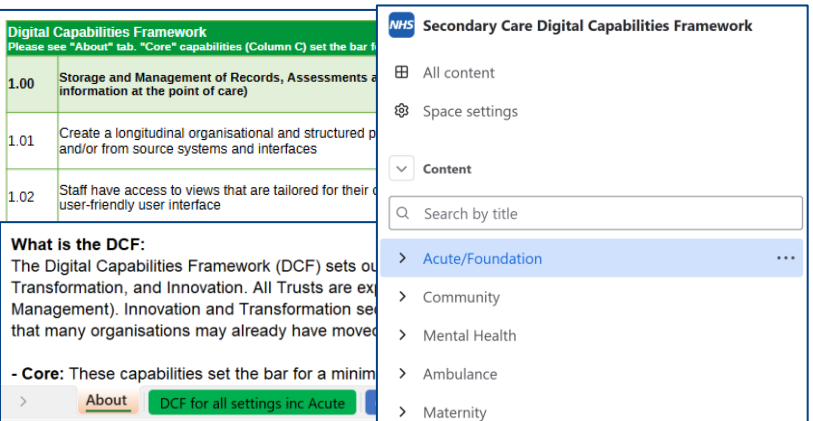
Recommendation: consider foundation vs core.

'… somebody has conflated acute and core. It's become one and people are now saying, *oh, it's wrong. You don't need this content in that content*.'

‘It morphed into what acute providers must have as an EPR but that was not its original vision, but it was what was launched’

‘If you take a step back. Care is care, so there's a foundation level if you like. And then you look at where the exceptions and the extras are and then those should be defined by care setting’

‘Not everything that is in Core is useful’



Useful | Up-to-date

Use case: Procurement

Comprehensive coverage

Many users talked about capabilities that are missing in the DCF. Actual or perceived gaps reduce trust and give the impression that the DCF is not fit for purpose. Areas highlighted:

- Clinical safety and safeguarding
- End user needs and iteration
- Usable data flows and ease of data input
- Accommodating offline running (resilience)

Recommendation: Review gaps identified and conduct deep dives. Consider if 'emerging' capabilities can be on a public roadmap, so people know that they are soon to be added.

'surely that discussion about online and offline is relevant for everybody.'

'[the DCF] never actually matured to where it needed to be ... didn't have the correct components in all of the correct buckets, so the foundation didn't have everything that was relevant to foundation for the everybody'

'How many of you have systems that take into account safeguarding and can record it correctly? It's not there in the everybody bucket. So what are we going to get back? Because it never made the everybody bucket'

'Wonder if there is a way that DCF can help organisations to get back to the refinement developed in paper based systems'

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Useful

Use case: Procurement

Holding suppliers to account

DCF is valued as it supports structured conversations with suppliers. However, many respondents highlighted that it is ‘not enforceable’ and ‘circumventable’. This affects its credibility.

Recommendation: guidance on where and how it is appropriate to use DCF to hold suppliers to account. Highlight mandatory standards such as WCAG accessibility for browser-based systems.

‘We just negotiate just ridiculously poorly. We've got no ability to sort of come together properly as customers and leverage that collective voice that we have potentially to kind of really get that meaningful change’

‘we know a lot of suppliers don’t have DCF capabilities yet somehow they are still procured and implemented…So DCF maybe lacks credibility in terms of an effective mechanism to deliver what it’s trying to achieve’

‘that would then give me that ammunition to be saying to my supplier, *Hang on a minute. This is now core. What is your road map?’*

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Useful

Use case: Benchmarking

Alignment across DCF, DMA, HIMSS

Misalignment was problematic for benchmarking because it meant that scores could not be relied upon to support decisions about action needed.

People continue to be confused about the difference between DCF and HIMSS EMRAM.

Recommendations: Create a simple comparison matrix and guidance to explain how the different frameworks intersect (or do not intersect). Consider a derived product specifically designed to support benchmarking.

> '…if you cannot deliver the capability in the DCF at foundation stage, that means as per the mapping exercise that had undertaken, you cannot be at HIMSS EMRAN Stage 5. So how has the trust got to stage 7 when it cannot deliver the DCF foundational capabilities.'

> '…it could be that it's semantics. Or more likely, it's syntax. More likely it's to do with the fact that a trust has got that capability to get themselves to HIMS Emran stage 7, but they have not got that capability, or they don't use that capability from their core clinical system.'

Useful

Use case: Benchmarking

Clear, unequivocal language

Because DCF is used in ways beyond its original purpose, such as in digital maturity assessments, some users were unclear about the difference between EPR functionality (what it does), usability (how it does it) and capability (the organisational function it supports).

The word ‘capability’ is used in different ways…

Recommendation: resolve in guidance, consider as part of conversations about naming and links in with DMA for ‘digital maturity’

‘I think there also may be some little bit of confusion between when you're looking at it. Is it what the supplier can do? Or is it what you are using? Because they are different.'

Use case: Benchmarking

Use granular language

When benchmarking, some users found many DCF capabilities hard to benchmark against as they consist of composite statements.

In some cases, one part might be ‘essential’ and another a ‘nice to have’.

Recommendation: review and resolve issues with composite statements.

‘…it says front and centre, the system must be able to process internal referrals with automatic recommendations of referral routes. Now I bet people can do the first one. But not the second one…’

Useful

Use case: Improvement

Support action plans for improvement

Some users wanted a simple tool that allowed them to record current state and highlight where improvements are planned. This seems to be a gap between the DMA, WGLL and DCF tools.

Recommendation: consider a derived product specifically designed to support system improvement planning, potentially incorporating elements from the DMA and WGLL.

‘So you've got tools at your disposal, not just the DCF. It’s one component of many things and you could add things to WGLL and the DCF to be almost like your little hooks that that draw people towards the DCF’

‘I think there's a link between all three of those toolings that isn't coherently being thought about at the moment.’

‘DCF, DMA and Usability are three parts of the use case - I don't think it is clear … it leaves people again trying to interpret’

DCF needs to be

up-to-date

An iterative DCF

To be trusted, DCF needs to be both updated and seen to be updated. Users need to know what's changed, when and why. They also need to know what's being developed, ideally through a public roadmap. The current change log is high level.

Working in the open improves trust and could encourage suppliers to engage.

Recommendations: Review how DCF is updated and how changes are communicated. Ensure versioning is clear and history recorded. Consider a public development roadmap.

'I feel that there should now be an amalgamation of the foundation capability in the DCF. To say these things that were innovation five years ago, three and five years ago should be now mainstream. The things that were innovation should be transformational and new innovation capabilities should come in'

'there's a fundamental question – do you want a framework that keeps up to date and up to pace with the evolving nature of EPR capabilities? Do you want the cutting edge?

'For me, the DCF needs to be a moving thing that slowly creeps forward. That continually asks, asks the suppliers what they can do, continually asks Hospitals what they need'

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Common user needs

Up-to-date **Usable** **Useful**

Use case-specific user needs

Now and next

- An iterative DCF
- History of previous versions
- Detailed versioning
- Development roadmap

Clear guidance

- Guidance on specific use cases
- Guidance on what the DCF is and how to use it

Clear content

- Right level of detail for my needs
- Easy to navigate
- Intuitive, logical structure

Use case: Procurement

- Capabilities common to all
- Comprehensive coverage
- Holds suppliers to account

Use case: Benchmarking

- Alignment of DCF, DMA, HIMSS
- Clear, unequivocal language
- Use granular language

Use case: Improvement

- Support action plans for improvement

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Summary overview of recommendations based on DCF user research	Makes it more…	Quick win?
Make DCF fully open (no password) and accessible	Usable, Useful	Yes
Simple, clear navigation that allows people to drill down	Usable	No
Improve guidance and resolve composite statements	Usable, Useful	Yes
Focus on core capabilities	Usable, Useful	No
Separate DCF from the products based on it	Usable	Yes
Create a logical information architecture and search function	Usable	No
Review taxonomy, consider an ontology	Usable	No
Create clear guidance on DCF's purpose.	Usable, Useful	Yes
Resolve inconsistent language in labelling and guidance.	Usable, Useful	Yes
Consider renaming DCF (following further research)	Usable	No
Review gaps, conduct deep dives, consider public roadmap	Useful, Up-to-date	Yes
Create guidance on using DCF to hold suppliers to account	Useful	Yes
Create a comparison matrix for DMA, WGLL, DCF, HIMSS	Useful	Yes
Create derived products to support benchmarking and improvement	Useful	Yes
Review how DCF is updated and how changes are communicated	Up-to-date	Yes
Ensure versioning is sufficiently detailed and history recorded	Up-to-date, Useful	Yes

Local digital leader personas

Derived from DCF user research

Mo Imran, Chief Operating Officer

‘The Benchmarker’

Context

Mo’s Trust has recently merged with another. The Board wants to adopt a single EPR to streamline clinical workflows and reduce costs.

Mo is an experienced COO. He is using the DCF to help write a business case for the investment, including anticipated benefits.

Needs

As a COO, Mo needs an overview of existing EPRs’ functionality so that he can decide the best approach.

Mo needs to know if the enterprise EPR used by one of the merged Trusts can replace 5 separate systems used by the other Trust. He has very limited time to decide on his approach.

Tasks

Mo has asked his team to use DCF to create a matrix of core and unique functionality for the systems currently in use, including any gaps.

Clinical, digital and data leads will need to be satisfied that any change will not decrease the standard of care offered or increase risks to essential services.

Tools

DCF accessed via Confluence. EPR usability survey. Analytics data. EPR supplier info.

Mo is considering creating an MS Forms survey to understand where EPR functionality is used (or not used) to its full potential.

Pain points

Mo feels like some areas of the DCF are outdated. He would like to know which capabilities are most important to the workforce.

Before the merger, Mo’s team completed the DMA, which includes DCF capabilities. Mo’s team found the DMA confusing and hard to complete in places.

Sharon Toole, Regional Lead (Mental Health)

‘The Optimiser’

Context

Sharon is a regional lead for mental health, supporting nine MH Trusts providing patient care in community settings.

She uses the DCF as a reference guide to support optimisation; making use of full EPR functionality as part of service change.

Needs

Sharon needs to optimise the way that MH EPR systems record and share data, such as care plans and observations.

Other areas of focus are task and medicines management, alerts and referrals. Sharon needs the DCF to show her the relevant standards, and which MH EPR products meet them.

Tasks

Sharon is mapping out the various systems in use. She wants to understand what causes burden for frontline staff, such as repeated data entry and/or forms.

A key priority is to understand how MH data should be optimally collected and stored, to support and inform supplier discussions.

Tools

Sharon relies on supplier data, such as dwell times on different screens. Many MH EPRs don’t have inbuilt analytics capability.

Sharon refers to SITREP data and uses Visio to map out the pathway stages and tasks. She uses an Excel version of DCF downloaded from FutureNHS to identify areas for optimisation.

Pain points

MH EPR suppliers are hard to engage with and the NHS has few ‘levers’. Their products all work differently – there are various versions and local configs in use.

Sharon finds the Excel version of the DCF hard to adapt. She worries about her digital skills and is getting advanced Excel training.

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Freya Adam, Clinical Lead (Radiology)

‘The Upskiller’

Context

Freya works within a busy Trust’s Radiology dept. She has been asked to be the clinical lead on an EPR programme.

Freya was involved with a pilot for AI use in clinical imaging. She wants to update her knowledge and understanding of EPRs. A colleague pointed her to DCF on FutureNHS.

Needs

Freya needs to ensure she is up-to-date with radiology EPR products and how they work with other systems.

Freya is looking for task-specific training, eg how EPRs allow diagnoses in radiology to be linked to workflows. She can’t always fit this in around clinics, so often works in evenings and weekends.

Tasks

Freya isn’t sure what she will be asked to do by the programme. She is trying to learn as much as she can before she starts.

Freya has already been asked to suggest some key imaging workflow tasks by a business analyst who is developing test scripts for supplier demos.

Tools

Freya uses the FutureNHS EPR Support Hub and ‘Learning Labs’.

Freya uses internet search tools to understand how EPRs support other Trusts’ imaging workflows including scheduling, documentation, results communication, and film tracking.

Pain points

Freya feels like there is too much information on the Hub and she can’t find radiology-specific guidance.

Freya can’t easily tell what’s in each piece of guidance returned by a search for ‘radiology’ and is frustrated by the amount of data that isn’t relevant to her needs.

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Raheem Jay, Chief Financial Officer

‘The Sponsor’

Context

Raheem is the Trust’s new CFO. He is overseeing a staged roll-out of an integrated EPR across all clinical areas, starting with cardiology.

Raheem’s team used the DCF in Confluence to create a revised business case allowing for a slower implementation, reducing risk and impact on clinical and delivery teams.

Needs

Raheem needs to explain the logical sequencing for implementation stages, and when benefits will start to be realised.

At a basic level, Raheem needs to have an idea of how much each DCF capability will cost to procure and implement, and which elements are capital expenditure and which are revenue.

Tasks

Raheem sets strategy and direction for his programme team, focusing on priorities and costs vs forecast.

Raheem has been asked to support the comms team by doing a Q&A session on the benefits the EPR will have for staff, in terms of improving clinician experience and reducing nugatory effort.

Tools

Raheem gets regular reports from his BI team. He refers to the HFMA guidance on accounting for a new EPR.

As SRO for the programme, Raheem will ‘only get involved in technical operations if someone escalates a major issue’. He uses DCF’s user stories to give ‘real-world’ context.

Pain points

Raheem finds much of the DCF to be ‘too technical for me’ – and he does not see how ‘transformative’ capabilities are different to ‘core’.

Raheem was also surprised that business resilience is described as a ‘non-functional requirement’ in DCF.

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