Where the click do you start?

The 4 enablers for creating a digital NHS

Alt Report V1.0

Chapter 1 : Clarity & Leadership

Supported by

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Claire Cater, Founder

Report V1.0

"Provoking collective thought and practical action"

You are invited to read the following pages, share what you think and do something. Sign up for further additions, the workbook and events.

This is not a one off. Expect V2.0 and V3.0 to follow.

Thank you

We would like to say a very big thank you to all those who gave time to be interviewed and for their generosity in sharing their learning and ideas. You have inspired us and we hope many others too.

Thank you also to the HiMSS team for their support and encouragement as our partners on this journey.

Editor & facilitator

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Supported by

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#AltReport

@SocialKinetic1

www.thesocialkinetic.com

"We would like readers to share this, tweet about it, pass it on to colleagues and then go on to reference it in presentations and documents.

But, more importantly, we want this to be about bringing together the power of the collective ideas, energy and knowledge, and ultimately some help and advice that leaders can act on."

Claire Cater

Where the click do you start?

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Forward

When embracing TEC, we have to do 3 things:

1

Get it right every time for the patient

Connect clinical decision making with joined up and current knowledge. Improve the delivery of care itself to improve outcomes and drive out unexplained variation. We can only achieve this by ensuring clinicians have all the information available at the time and place where decisions are made, in a way that is fast and intuitive.
We have to stop pretending that the human brain can remember everything when medical knowledge doubles every 3 years.
The combination of genomic person-generated behavioural and clinical record information will allow us to personalise treatment plans in a way that hasn't previously been possible, and to do it in partnership with patients.

2

Focus on populations not organisation

TEC will allow us to see the problems that our populations face, and the interdependence of the various services that attempt to address them. Use the data to divide the population into manageable segments and develop strategies around what we know. The systematic measurement of outcomes and the planning of workforce teams around those segments will allow the contractual arrangements to drive the results we want to see. TEC offers the opportunity to glue together our fragmented care system and shift us from a health region to a health eco-system. This is essential for STPs, and those needing TEC and good data, to inform how they come together to design new and better ways to support their local populations.

3

Let go and see technology as a partner

TEC will change the power balance between patients and professionals, heralding an age where people have more control of their healthcare, more access to their records and are active partners in their care. With emerging capabilities around artificial intelligence, people will have greater access to the same clinical know-how as the professionals.

There is often fear that technology will replace the clinician and the doctor-patient relationship. The reality is that it is a supporter, enabling smarter decision-making, reducing wasted time and enhancing the choice and flexibility of how people access and deliver care. It frees up time for clinicians to spend with the patients that need it most and helps them take things to a whole new level of saving and improving lives.

If you are a leader, or committed to working in, or with, the health and care sector, or responsible for delivering the TEC (Technology Enabled Care) agenda, then this is for you.

This is not a report for you to read and tweet about, mention to colleagues, cut and paste in to your next report, email or blog about, and then to sit on a shelf. Please do some, or all, of these things – we look forward to reading them and hearing what you have to say – just don't stop there.

We want to do our bit to unleash the ideas, energy and enthusiasm beyond words on a page and help leaders focus on the how of making TEC possible too. There seems little point in telling people the what, if we don't move on to the how of something this important.

Step 1 - Read this: It represents the collective perspective of what people like you (or maybe not like you) believe to be critical to making the TEC dream a reality.

Step 2 - Tell us what you think: Do you agree, have you got more to add, what practical experience have you got to share and what would you like to explore more?

Step 3 - Get going: Focus on the practical things you can do. Sign up for the supporting workbook which will follow.

Why did we do it?

Health and social care are not sustainable in their current form and we know that TEC has mind-blowing potential to save money, time and lives too.

There are approximately 3 million NHS and Social Care staff in England alone. Imagine the future of healthcare if they were connected, engaged and enabled with data and technology.

Surely, it's a no brainer? We have to get on with it. We've looked at why it's so hard to make it a reality and what needs to change to make it possible.

It's time to leave behind the failures of the past and capitalise on the current enthusiasm and commitment to the how - getting on and doing it now!

Wachter report:

"The experience of industry after industry has demonstrated that just installing computers without altering the work and workforce does not allow the system and its people to reach this potential; in fact, technology can sometimes get in the way. Getting it right requires a new approach, one that may appear paradoxical yet is ultimately obvious: digitising effectively is not simply about the technology, it is mostly about the people."

Robert Wachter

Despite their commitment – leaders struggle to get things done

This kind of systems change is tough, not only for the NHS, but for patients, partners from NGOs, and the private sector too. The system (the organisations from care homes to hospitals which make up the NHS and the wider health and care sector) just hasn't been designed to build collaboration and join up very easily.

The vision and purpose are often missing

When we designed 3D (a change framework and readiness tool) for the NHS, we worked with leaders and staff around the country and found highly committed, talented people often struggling to get things done. The vision and purpose of the change they were trying to deliver was often missing or unclear; they didn't have a clear picture of who did what, and where, in their own organisations, amongst their partners and across their communities. They didn't know how it all fits, or could fit, (and work) together. We have found this with some STPs too, which is worrying, as they will only realise the potential if they can collaborate meaningfully for the benefit of their local populations.

The squishy middle can unintentionally hinder rather than help

The 'squishy middle' of staff, between the front line and leadership, often lack the skills, empowerment or resources to support delivery. Decision-making is hard, progress can be slow and there is often mixed understanding of the issues, roles and objectives.

Old habits die hard and there can be 'death by work stream'

The people involved often don't have the knowledge, resources, networks and relationships they need to collaborate and do their job (we call these the human factors). 'Death by work stream' can often mean delivery and planning is not inclusive or responsive enough. Traditional bureaucracy and long meeting agendas, while comfortably familiar, are not leading to the right level of collaboration and, importantly, action. There are exceptions of course, we just need more of them.

> *"TEC change isn't about the hardware, it's about the people. The elements of system infrastructure, technology, data, skill and leadership must be there, but things happen because people make them happen. Our learning here isn't limited to healthcare and technology – it's change in any complex system or large-scale organisation. TEC transformation, just like transformative change anywhere, is a very human journey."*
>
> **Claire Cater,** Founder, The Social Kinetic

McKinsey estimate potential savings of 7-11.5% - that's between £8.4 and £13.8 billion pounds based on the current £120bn budget

Just imagine the potential if we did all this nationally. This is a very small snapshot, you could fill several telephone directories with the potential.

NHS England using technology to beat cost of missed appointment

Using technology in one GP practice **reduced DNA rates from 10% to 2% - that's an 80% reduction**. DNA rates cost the country over £900m a year.

Unity Healthcare

Using technology has enabled Unity Health GP practices to offer their high-risk patients 20-minute appointments and their own dedicated telephone help line.

An early warning tool is spotting children whose condition is deteriorating and alerting clinicians, 24 hours a day.

In Cambridge University Hospitals Trust

16% of prescribing alerts have led to a change of prescription and a **saving of 2,450 bed days & £980,000**. It also means improved quality of care by avoiding adverse drug reactions in just one specialty.

4,500 patient appointments have been freed up in orthopaedics because x-rays and notes can be reviewed virtually.

VitalPAC and Nervecentre software improved how nurses record vital signs in patients.
The result was 769 fewer deaths across two hospitals: Queen Alexandra Hospital & Croydon University Hospital.

A telehealth hub run by Airedale across 210 care homes resulted in:

35% less hospital admissions

53% fewer visits to A&E

59% less nights in hospital

60% less paper work

+ 29% more time to see patients

Talor K. how Digital Technology is transforming health and social care. Deloitte Centre for Health Solutions (2014)
NHS England using technology to beat costs of missed appoinments (March 2014)
Unity Healthcare (2017) Cambridge University NHS Trust (2017)

What did we do?

Initial research with a group of 40 TEC leaders gave us food for thought.

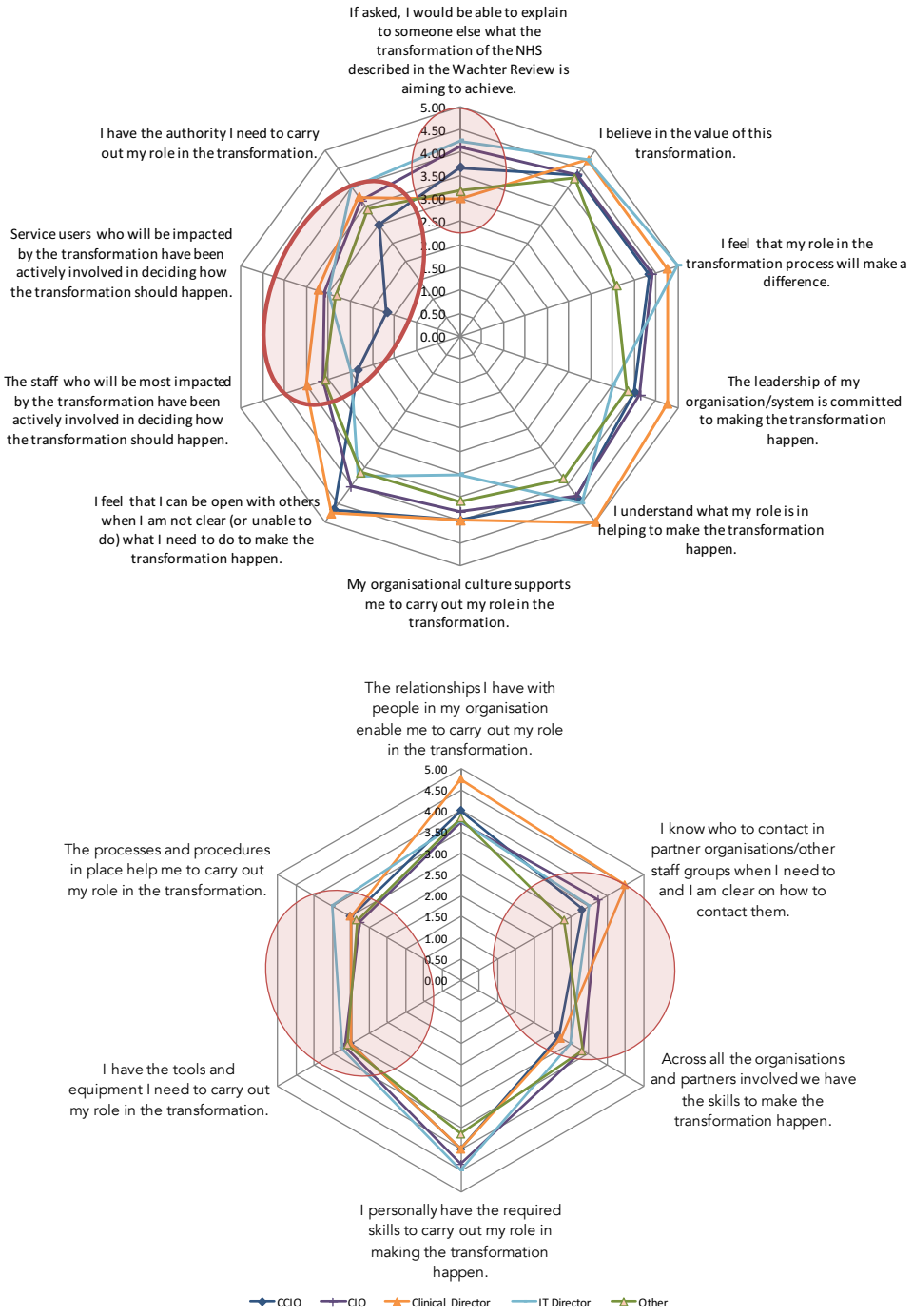
Respondents included: Chief Clinical Information Officers (CCIOs), Chief Information Officers (CIOs), Clinical Directors and IT directors within the NHS.

We asked them some simple questions; the answers were revealing:

Despite this being the most informed audience

- There were mixed views about their ability to describe the vision of the TEC agenda – it is important that those at the heart of making it happen are aligned behind a vision and purpose
- There was a broad consensus that staff and service users had not been involved in designing the future, which seems pretty key if they are the ones who are going to be using it
- There were mixed views about whether they were operating in a supportive culture – which will make it hard for people to get things done
- They didn't believe they had the tools, resources, relationships and infrastructure (processes and procedures) they need to deliver
- Individuals felt they had the skills they needed but were not so sure about others/partner organisations – so what does that mean for working together?
- There was patchy awareness of who to contact and work with (with exception of clinical directors who have been in post much longer) – so would that make it hard for the likes of CCIOs/CIOs to do their job?

The belief is there – but the connection and empowerment of the people seems to be missing.



The TEC leaders perspective

We decided to talk to those on the front line of TEC delivery to discover what they thought the challenges were and what would enable them, and others, to deliver successfully.

Here are their views, and some of our own, based on what we learnt.

We hope you find it helpful reading and that you get involved in steps 2 and 3.

If you are a TEC leader, we wish you luck. You have our support, we look forward to seeing how you change our world.

Claire Cater
Founder, The Social Kinetic

A hack mindset

What we have learnt is the richness of the learning and the need to apply a 'hack mindset', build shared understanding that goes beyond a document, walk the talk and bring people together to discuss and share are as important as considering how the learning can be applied where needed. This is what we will be addressing next.

Get Involved

If you haven't already signed up to:

- Receive the following 2 chapters and workbook
- Get involved in the round-tables and forums
- Share your ideas and learning

Please do so now here

Adding to and sharing the learning

As new case studies emerge, we will be adding and sharing them with those that sign up. We would like to know more.

What we found

The people we spoke to had a lot to say, so we are releasing the learning in chapters.

This is Chapter 1: Clarity and Leadership

These are the starting points and, in our view, you can't have one without the other.

It includes what people told us, together with some asks and conclusions. We have included case studies and learning at the end.

Introduction

TEC - a very human journey

> **Making the TEC dream a reality relies on the interoperability and connectivity of the people, their vision, purpose, skills and ideas.**

Claire Cater
The Social Kinetic

The TEC enablers of change

Critical issues for TEC leaders to consider and address

Overview

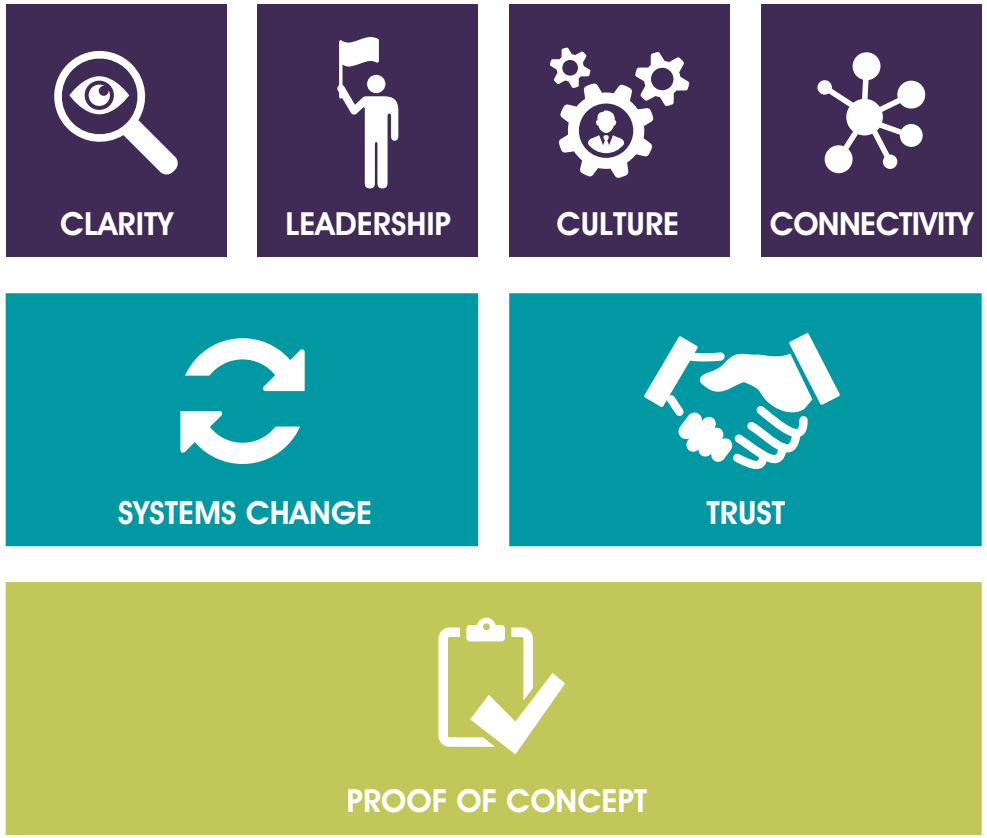
Making change is rarely easy, and TEC (Technology Enabled Care) is no exception. It's system change of the biggest kind. Teams and organisations need to work together with the shared purpose of making our health and care system safer, more efficient, joined up and accessible. They need to be able to do that while responding and adapting to the world changing around them, or not as the case may be.

What adds to the challenge, and the potential, is the scale and hyper-specialist nature of the NHS, it's people and the issues. From robotics to community care, there can be no other sector more diverse, with so many world-leading experts, in so many different spheres. The term frustratingly brilliant comes to mind at times.

At its best, it's clinically ground-breaking and life changing. At worst, it's handcuffed by suffocating procedures and low morale, hard pressed funding, rising levels of demand and expectation compounded by a culture of fear and risk aversion, and the scars left by the failures of the past.

The question is, how to make TEC change happen in a way that helps realise the benefits everyone believes it will bring.

Our conversations with those at the front line of leading and delivering the TEC agenda, combined with existing research and our own experience, identified 4 critical levers for change which are underpinned by 3 key principles.



Making TEC a reality

The enablers

Clarity

Clarity is the starting point. Ensuring people are heading in the right direction, working towards a shared goal, with mutual understanding of what they are doing and why, is key. A clear and shared vision, purpose and values will spell out the ambition and paint a meaningful picture of what the future and success will look like for everyone. This should be backed up by the why, and what the benefits will be.

Leadership

TEC needs leaders who are able to facilitate and lead systems change. The CCIO/CIO should be the Hacker In Chief on the Board, and clinical commissioner for digital. TEC requires skilled and confident leaders who can influence, mobilise, facilitate and connect organisations and people to each other, and the knowledge and the skills to make it happen. Equally they need to act as diplomat and translator, a role many perform now.

Culture

The system needs a 'hack mindset' to ensure the right levels of collaboration and 'joining of the dots' between the data, the learning, the needs and potential. To overcome risk aversion which stunts progress, leaders must instil 'test and learn' as the norm. Critical is how leaders and the system address 'organisational competitiveness' and fear of failure. The power is in the collective.

Connectivity

We need connectivity and interoperability between the systems: vision and purpose, data, people, skills and resources. Leaders and their teams should be asking themselves - are these things connected and what's the impact of this on the vision and purpose and others every day.

The underpinning principles

Systems Change

This is not about linear A-B planning. There is a need for skilled systems change leaders, able to bring together the diverse networks of individuals, departments and organisations and consider the 'issues in the round' in addition to being responsive to the learning and the constantly evolving environment within which they operate.

Trust

Trust must exist between people, organisations and systems, together with trust in the vision and its potential benefits.
Lack of trust will undermine everything you try to achieve.
Its presence will power your potential to progress.

Proof of Concept

People told us they wanted to see and hear the experiences and learning of others. The 'show, not tell' principle stretches much further – it's about the sharing of success and failure so that individuals, organisations and systems can see what's possible, be inspired and learn from each other. It needs to show how to, and the benefits of failing fast and applying the learning.

SK

The TEC change roadmap

1 Start with a clear and shared vision and purpose

2 Build understanding and support

3 Co-design and involve people end to end

4 Focus on the people: engage-ment, connectivity, leadership, roles, culture and values

5 Test, listen, learn and improve

A world-leading health and care system. Better for everyone.

More time, money and lives saved.

Improved quality and safety - less mistakes.

Less paperwork.

Clinicians and professionals with more time for those who need them.

TRUST & COMMITMENT

- Clarity of the who, what, when, why and how - a tailored narrative
- Systems leadership and Hacker in Chief approach
- Culture of collaboration and a hack mindset
- Connectivity and interoperability of systems, data, people, skills and resources
- Show and share examples of success and learning

SK L

Invest in understanding

When teams have a understanding of each other, they find developing a shared vision and purpose and co-designing solutions much easier.

What works is when we see leaders and staff physically touring each others services, good old fashioned shadowing and show and tell sessions of what they do, their learning, and their needs and ambitions.

L

Engage staff end to end

Over 100 clinical and administrative staff from across the organisation were seconded to the eHospital team. This meant the EHR was build by CUH staff, for CUH staff.

Approx 2500 staff volunteered to become ‘super users’ and were given extra training in how to support their colleagues.

Cambridge University Hospitals NHS
NHS Foundation Trust

SK

Chapter 1

Clarity & Leadership

> “Shared vision is critical if we are to get people to work together across systems, pool resources and apply joined-up thinking.
>
> We are organisms not organisations so we have to think and work that way.”

Rachel Dunscome, Digital Director,
Salford Royal Group world-class system leadership

1a Clarity

If people don't know where they are going or why it's unlikely they will get there.

Clarity of shared vision and purpose are critical, you can't really start without it. If you do you risk everything, from the achievement of the goal to wasted time, money and goodwill, to name but a few.

> *"For me, success for the next 12 months revolves largely around interoperability and supporting organisations and systems to become more joined and able to talk to each other. At the same time we need to be working with providers on the larger digitisation piece, giving them the platforms to be able to take the pressure off services such as A&E and urgent care. The longer game – say 5 years out – is working towards a seamless system where the right kind of information flows securely and we're able to aggregate data for health improvement, treatment and research purposes."*
>
> *"Show and tell is really critical, which is why we are unashamedly focusing on demonstrating the art of the possible by showcasing the work of the Global Digital Exemplars. People will find new ways of working when they see the possibilities and the gains being made by their peers."*
>
> **Keith McNeil,** CCIO NHS England

Clarity of Vision & Purpose

‘Mission Possible’: What we were told

Nationally it’s complex and not that clear

Despite some great progress, the wider NHS, health and social care system hasn’t yet bought in to a clear and collective vision and purpose.

Leaders would like to see a shared vision of what the system is aiming to achieve in the medium to longer term. They would like some clarity about the purpose. What could the benefits be for patients/citizens and staff? What efficiency and financial savings could be made? What is in it for them? Over the years, the TEC agenda has felt like ‘mission impossible’. In order to build support, there needs to be clarity so there is increasing understanding of what success will look like and belief that it is achievable.

National leaders are being asked to outline a definitive plan which clarifies priorities, generates momentum, inspires and sets credible and achievable timescales, taking into account the huge financial and operational pressures at every level of the NHS.

Share more than just the dream

The idea itself is not enough to drive the changes needed.

The question is how to create a shared vision of the journey, sense of purpose and commitment to the cause.

Develop your vision collectively
Project 1, 3, 5 or 10 years in to the future. Choose your timeframe.
Determine the ambition and what success will look like.
Paint a graphic and mental picture of what you are aiming to achieve.
Be clear and concise. Use meaningful language.
Communicate, discuss and share it widely.

Show me...

The benefits need to be clear and compelling and show how TEC can help to build a viable health and care system of the future.

TEC is less about the digital and more about creating an environment where local organisations can come together around the needs of their populations. To do that they need more connections between the data to get a clearer picture and understanding of the potential, together with the planning and design. Organisations across the health and care system need to be able to see how what they are doing could fit and work together and what the benefits could be for each of them. Leaders need to understand the value and believe it’s going to be worth the investment, the pain and the hard work.

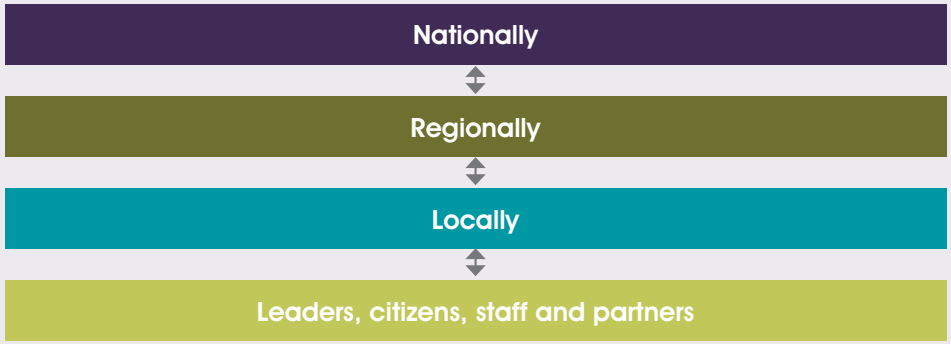
NHS Digital is a complex web of inter-related programmes of work, covering everything from electronic prescribing and screening programmes to electronic patient records and e-referral systems. Building understanding of how they fit together, progress to date and the learning are important too.

> ***“National strategies can only go so far. It only really becomes meaningful when things are local and relevant to the people on the ground and those delivering the change and the services.”***
> **Mark Davies,** Clinician, health and technology expert.

Share your purpose (mission)
Ensure you understand your partners too.
What do you do and how? What is special/important?
Who do you do it for and with?
How do you do what you do?

Clarity and connection: Enabling the 'players' to join up the systems, people and benefits

One needs to understand the other



Vision: What are we aiming to achieve in the short, medium and long-term? What will that look like?

Purpose: Why are we doing it? What problems will it solve? What will the benefits be?

Priorities: What are they for us?

Connection and fit: Where is it, what's the need and the impact?

Tools and resources: What and where is the data, the tech and the support we can and should connect with?

Show me

1. How one connects to the other.
2. Examples of where it has been done before and the benefits/impact/learning.
3. How we are going to do it together.

Questions and considerations for you

Do you have a clear vision and purpose?

Do you know what your ultimate goal is, why you are doing it and what you are trying to achieve?

Is this shared, understood and supported?

Are you clear about who needs to be involved?

Describe the purpose and the benefits of your current plan, including who will benefit and how, from staff to citizens and partners.

Make the destination clear

With a clear starting point and destination, it's easier to be flexible and give others the mandate and confidence to innovate and flex the approach to suit them. It's easier for others to contribute meaningfully to shaping the vision when the ultimate goal, and what they have to work with, is clear.

Show me what works..

Some find the technology and apps can be minefield. They want to know where to start and which of the many innovations to choose from. They want more clarity about what works and what is proven to deliver tangible benefits.

> ***"Change management is the biggest challenge. We need a strong narrative and to bring people along with us and make it a reality. It's a transformation journey. We need to train people that are technically capable. For the Digital Academy, we are developing a programme that is globally recognised for training and development."***
>
> **Harpreet Sood,** Associate Chief Clinical Information Officer, NHS England.

Enable me with understanding

Having understood the vision, purpose, the technology, the resources and priorities, next is the how. Individuals at every level need to understand their role and the role of others, how they can and should work together. This isn't about organisation charts and job descriptions (although they have their role), there needs to a real understanding and working it out together, testing and learning too.

"Narrative is important. You need to paint a clear and imaginable picture of the future. Tell the story in lots of different ways, so that it's relevant to the audience. Include the personal experiences and the learning too – from citizens and clinicians. Bring it to life and make it human. Make it real for everyone."

Rachel Dunscombe, Digital Director, The Salford Group

This is system change so it will keep evolving. Leaders need to pay regular attention to what it means for everyone and consistently revisit these questions.

Checking in and ensuring everyone is still heading in the same direction, willing and able to get there is important.

It's not enough to know they are a cog in the system; people need to understand where they fit, where others fit and the impact they are making.

"We need to have better roadmaps about what capabilities we can look forward to having in the future. This is particularly important when we start looking out of health into the broader care economy."

Lois Lere, Associate Director of Digital Transformation and Chief Information Officer, Berkshire West CCG.

"We know from developing 3D that there are some key ingredients which are absolutely pivotal to being able to deliver change, people need knowledge of change as well as understanding of the role they're going to play and the roles of others too."

Claire Cater, Founder, The Social Kinetic

SK L

Capitalising on the enthusiasm

Great Ormond Street Hospital

To overcome the challenge of managing high numbers of good ideas and request to consider new technology, Great Ormont Street have a dedciated email address to collect suggestions which are reviewed by the Project Board.

Others have set up internal 'Dragons Den' sessions. They make it clear what the priorites are, and the criteria that need to be met, and ideas are presented to a panel of patients, staff, clinicians and others.

We see a lot more commitment, trust and less frustration (from not being heard or an idea not being prioritised) where there is a channel for people to get involved/share their ideas, and a mechanism for feedback.

Be clear before you leave the room

Taking 'understanding' seriously is critical for leaders and every individual involved. If they don't they risk chaos, impacting quality, safety and momentum, wasted time and money, goodwill and commitment.

"It's important to understand what you are starting with. You need to really understand your people, their needs, their differences and the way in which they work. We used employee workshops, planning and interviews as well as observation studies so we could see what was happening. We used the results to underpin the changes we needed to make."

Phil Mottram, Enterprise Director Vodafone

The whole area of data and technology can get complicated and there are multiple 'tech and data languages' spoken. The view is, rewriting them all isn't feasible.

"It's become apparent to me on almost every project I've been involved in that you come away from a meeting of, say, 20 people and if you ask the people who have just left the meeting they've got 20 different opinions about what just happened in that two hour meeting."

Nick Booth, Chief Information Officer for Connected Cities North East and North Cumbria.

Do you understand?

Leaders should seek to build shared understanding as a matter of priority.

They need to ensure they are communicating in ways that are accessible and clear and consider the detail and the ask of the people they work with. They need to make it OK/expected to speak up and question. They need to check that everyone really does understand and they need to listen equally hard. The best way to do this is to ask people to play back their understanding in their own words. If they are unable to do it, then you can almost guarantee their isn't alignment and progress wont be made.

Everyone should be committed to not leaving the room without being absolutely clear about what was said.

They should understand the impact, the ask of them and of others too. If there are concerns or further questions, then they should raise them.

"Making the changes we need to make will require both infrastructure and changes in mentality. We need to understand and appreciate different mindsets. For example, a concerned mother is unlikely to take a chance on something she's not familiar with when the alternative is to go to someone she knows and trusts, whereas someone from the economically active 20s-30s age group who wants immediacy will embrace other options provided they are intuitive, trusted, secure and easy to use."

Indra Joshi, Clinical Lead for Digital on Urgent and Emergency Care NHS England.

Conclusions

1. Clarity is the starting point – you need to regularly re-visit and ensure everyone is aligned.
2. A shared vision and purpose are essential .
3. Flexibility and innovation can flourish with a clear destination in mind.
4. Think about both the individuals and the organisations, and what it means for them. Be clear about the what, why, when and how, and keep checking in.
5. Take understanding seriously – build it and encourage others to take responsibility for it.

Shared vision and purpose are often lost

1. When SK was designing 3D and working with leaders and staff throughout the health system, we found that, despite high levels of commitment, the shared vision and purpose they started with was often lost. In system change, the need to keep revisiting the vision and purpose is important, as it evolves and new 'players' get involved.

Few organisations/systems have a clear picture of their ecosystem

2. We also found that very few leadership teams and groups of system leaders. including STPs. had a map and shared understanding of their ecosystem. Something showing who did what and where, and how it all fits or could fit and work together. The detail and shared understanding was often missing. This makes planning and working together difficult and significantly undermines the potential to find creative joined up solutions.

3D is a 3 step framework and mapping tool which supports systems change.
It has been designed with staff and leaders across the health and care system.
It enables teams, organisations and systems to come together to design and deliver their change/vision together.

Change principles for clarity

Systems Change

In a changing system it's increasingly important to have clarity of vision and purpose. With a clear destination, as things change it enables individuals, organisational and systems to constantly learn and adapt while ensuring they are still heading in the same direction.

" If people don't know why, how, when, who with and what the benefits with be – they are unlikely to trust, commit or be able to deliver."

Claire Cater, Founder, The Social Kinetic

Trust

Clarity of vision and purpose is essential if people are to put their trust in the TEC agenda. It's human nature to want to see the whole picture before committing, particularly when it involves major change.

Proof of Concept

"The NHS is tremendous at being able to solve a problem in one part of the system and not sharing it with anyone else. The NHS has a poor track record of spread, but there is an opportunity with the GDE programme to get around this. It must be different this time."

Andy Kinnear, Director of Digital Transformation, NHS South, Central and West CSU

For the TEC vision to become a reality it needs enough real world evidence and examples, because when people can see the potential, their path to the future becomes clearer.

Questions and considerations for you

How will the delivery of your vision and change impact others?

Who has been involved? Who else needs to be involved?

Do you have a clear picture of the pathway end to end?

Describe the purpose and the benefits of your current plan, including who will benefit and how, from staff to patients.

How will it impact different roles? What do you need people to do? Do they understand it? Are they able to do it? Has it been planned for?

Have you made it real and relevant for the key audiences? Where are the gaps?

1b Leadership

TEC represents the biggest transformation in the health and care system. It needs world-class system leadership.

> We need more TEC leaders – much like their high profile clinical peers – to be visible and respected, inspiring others to want to follow in their footsteps.
>
> **Claire Cater,** The Social Kinetic

The Power of the Collective: What we were told

System leadership is critical

Much like the arrival of Clinical Directors to the board, some years ago, the CCIO/CIO is critical. They need to establish links between the data, technology and the delivery of the very best health and care, and educate their boards and fellow clinicians about the potential. If not already, CCIOs/CIOs should be the right hand to the CEO. Boards need to adapt to considering TEC in almost every aspect of what they do, it should be woven in as the norm, not the exception.

Hacker In Chief

Facilitator of people, skills and knowledge, to design and deliver the best solutions.

Dot joiner of the purpose, knowledge and data.

Collaborator and co-creator

CCIOs/CIOs need to build an appetite for change and a 'hack mindset' at every level of the organisation. TEC is not a workstream, it permeates the whole system and it involves everyone.

> *"The CCIO/CIO should be the Hacker in Chief on the board, bringing together collective thinking, innovation and inspiring others to find and deliver the solutions together. A hack mindset will allow organisations and systems to leapfrog and create change at pace."*
>
> **Claire Cater** The Social Kinetic

Hack vs Hierarchy

The new generation of CCIOs and CIOs must be skilled, connected system leaders who can build a culture of patient-focused engagement among clinicians and staff, whilst ensuring the system develops the right training, time and support at the levels which allow everyone to become effective users of technology.

These key roles have multiple hats to wear – as leaders with a clear vision, facilitators of partnerships, universal translators (of the needs of patients, people in the system and designers), identifiers of gaps in skills and training, collaborators at their own level, and empathic guide, all with a focus on collaboration in delivery.

Stakeholders need their TEC leaders to think 'people before process' and 'relationships before rules', to understand the TEC agenda and be comfortable with digital being business as usual. They must be visible ambassadors who model commitment and belief to the people they need to take with them on the TEC journey. Old power models are not effective for systems change. Leaders need to understand and work with the 'new power of the collective'.

Old power	New power
Currency	What is current
Held by a few	Made by many
Pushed down	Pulled in
Commanded	Shared
Closed	Open, visible and inclusive
Transaction	Relationships

Jeremy Hiemans - TED Talk - 'What the New Power Looks Like' @HelenBevan

The C-Level Triangle

Relationships at leadership level are key to driving adaptive and responsive innovation and systems change. The triangle between the CEO/CFO, CIO and CCIO must be open and collaborative.

"The organisations that get it really right are the ones that get their C Level triangle working really well. For me that's the Chief Executive and Chief Financial Officer at the peak of the triangle with the CIO and CCIO as the mainstay deliverers. If you can get those three elements in harmony, then you've got a real fighting chance of success."

Andy Kinnear, Director of Digital Transformation, NHS South, Central and West CSU

CEO/CFO: Courage & commitment

TEC is a medium to long term plan, with 3-5 year implementation. Chief Executives must be courageous in their dedication to this long-term focus on informatics rather than getting tangled up in firefighting for immediate gains elsewhere in the system. There needs to be trust and awareness of different roles, perspectives and skill sets. An understanding of what each person brings to the team.

CHALLENGE

Planning medium-to long term when the average lifespan of a CEO (and what they are judged on) is shorter than many of the aims for TEC. Setting the strategy and demonstrating the benefits which may not be cash releasing.

Systems change

CIO: Skill & Leadership

Work in the new system to move things forward with the right levels of skill. The Digital Academy will play a key role in this, with the aim of bringing all CIOs up to the level of the best.

CHALLENGE

Professionalising informatics and looking at organisational data. Building clinical engagement where non exists. Encouraging participation of clinical leaders not jsut 'tech hobbyists'

Leading collaborative, transformational change which uses technology to create clear benefit.

Accountable for strategic direction and health informatics delivery

CCIO: Engagement & Translation

Support and expert clinical advice to CIO. Motivate, empower and inspire the clinical fraternity, translating people's needs at every level, and encouraging people to look outside their own interests towards TEC's wider clinical gains, e.g. Medical Directors or Nursing Directors.

CHALLENGE

Raising the profile of Clinical Informatics and looking at how pathway data can be used to improve clinical delivery

Connected people and systems

Leaders need to engage and inspire people, in a change-weary system, to see the collective potential and be willing, brave and committed to working together towards a shared vision. Infrastructure change is beginning to happen, with STPs looking at how to restructure the architecture to bring everything together as one accountable system of care.

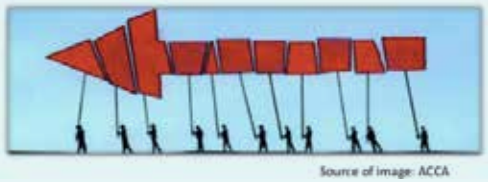
It's the way that people come together which will determine the scale of the success.

"The STPs are a step in the right direction towards systems change, but there are still big gaps and the mentality has not yet changed."

Andy Kinnear, Director of Digital Transformation, NHS South, Central and West CSU

> ***"We need to be comfortable with constructive disruption. It can be a negative concept. It's how you do it that matters. We need people to be brave enough to do something about the things that need changing. Some rules are unspoken and unwritten and we imagine them to be real. We recently got a big consortium together to buy a large scale radiology service for the whole region. We achieved it by being disruptive, with a clear understanding that it could and should be better and talking to the right people and bringing them along with us."***
>
> **Rachel Dunscombe**, CIO, The Salford Group

Leaders must find ways to empower people on the ground and avoid gaps developing in the patient pathway by ensuring the whole system is engaged, including linked services like mental health, dentistry and allied health professions. There must be plans in place to reach everybody, including those harder to engage and those who have traditionally been resistant to change.



Source of image: ACCA

We are witnessing the collapse of expertise and rise of collaborative sensemaking
David Holzmer

> ***'The Chief Clinical Information Officers group in Ireland has been instrumental in striking a change in how digital is considered by the health system of the whole country. Successful projects are now led by clinicians, at last that goal we have all had for years of projects being clinically focused has been achieved in Ireland. The idea of the clinician becoming the chief 'hacker' can be scary to the IT professional, but it needs to be embraced, but with the meaning this report describes. Clinicians, that can see digital having an impact on how they deliver patient care, need the assistance of the digital leadership to turn dreams into a reality, the 'hacking' nature of these leaders is as much to do with the status quo of the relationships, structures and beliefs as it is to do with technology.'***
>
> **Richard Corbridge**, CIO Health Service Executive | CEO at eHealth Ireland | CIO100 #1

The Role of the CCIO/CIO

- Change agent
- Clinical champion for tech
- Connector. Identifies synergies between clinical specialties
- Manager of uncertainty and expectations of clinical colleagues

Who

- Sets priorities and ensures tech is in the interests of patients
- Encourages participation in training and development
- Uses informatics to address clinical performance issues
- Encourages a culture of test and learn/evaluative to drive measurable outcomes

Gareth Thomas, CCIO, Salford Royal NHS Foundation Trust

> **"The kind of thing that keeps me awake at night is that the people holding the governance ring have organisational responsibilities that tend to make them look at their problem from an organisation-centric perspective, which is different from a regional or patient perspective."**
>
> **Nick Booth,** Chief Information Officer for Connected Cities, North East and North Cumbria

For too long the NHS has been seen as a second choice career path for the new breed of digital innovators. The reality is that the NHS should be 'the place to work' in the sector. It is arguably one of, if not the most, dynamic, exiting, diverse, large scale and specialist organisations in the world.

A history of failed implementations, combined with an institutional undervaluing of the importance of clinical informatics, has meant that the best talent is often lured away.

"We need to understand and appreciate the stress leaders are under, we need to understand the levels of resilience. Something has to give sometimes. There are not enough good TEC leaders. It's not a job people are naturally attracted to and want to take. We have to change that."

Rachel Dunscombe, CIO, The Salford Group

The place to be: Incentivising the best talent

The new energy and commitment to delivering TEC and the increasing recognition of the potential needs to create a new confidence, step change and narrative that speaks to the best talent out there and those looking for new careers in a growing and dynamic sector. From robotics and artificial intelligence, joined up health records which give clinicians the information they need in seconds, not hours or days, to apps that empower citizens to manage their own health.

"It's about getting the fundamentals right. To do that we need two things – first, to create the people with the skills and knowledge to support the transformation. And second, to give these people the opportunities to do something significant and make the transformation possible."

Harpreet Sood, Associate Chief Clinical Information Officer, NHS England

Clinical informatics should be recognised like a clinical specialty

Good data powers the NHS to plan, innovate and learn more quickly and effectively, making services better, safer and more effective for patients. Yes – good data saves lives.

The NHS employs over 47,000 health informatics experts, both in traditional informatics (recording activity and processing numbers) and also in clinical informatics, who aim to help develop clinical systems and decision-making. If the system doesn't plan for and develop this critical role it may lose out to the global competitive market for its skills.

"When we use data in the right ways, it can do much more than we can imagine. Just looking at the data for the stroke pathway, we improved survival by 10%, from 60-70%, in 90 days. It was simply a case of understanding and standardising the things that had worked with those that had survived. A combination of care, timing and medicines."

Rachel Dunscombe, CIO, The Salford Group

Clinical informatics should be recognised on a par with other more traditional clinical specialties like Orthopaedics or Anaesthetics. Leadership must both develop informatics from an organisational point of view and move to make clinical informatics a recognised discipline in its own right.

Wachter Review:

"The Advisory Group was struck by the small number of leaders at most trusts who are trained in both clinical care and informatics, and their limited budgetary authority and organisational clout. This deficit, along with a general lack of workforce capacity amongst both clinician and non-clinician informatics professionals, needs to be remedied."

Questions and considerations for you

Do you have the system leadership skills you need?
Where are the challenges and gaps?

Is there a 'hack mindset'? Are you co-designing enough with the right people and is it end to end? If not what more do you need to do?

Are you thinking joined up systems not just organisations? Does your STP have TEC and a wider joined up system and sharing of data as a priority?
Does more need to be done?

Is there a commitment to test and learning? Is it clear how you are doing this?

Is there enough commitment to stay the course when it gets challenging?

Empowering The Millennials

Creating systems change at scale will require leaders to devolve decision making from the top of the organisation, empowering the younger, generation Y clinicians to innovate and drive change.

"Young doctors like me can see the potential and are hugely enthusiastic. We can combine the practicalities of what's workable and helpful with the interest and appetite for technology. The trouble is we are stretched and that can be frustrating. Involve us, give us some time and space and we could make a huge difference."

Catherine Duskin

The new breed of CCIOs/CIOs provide the best path toward this empowered change, as the Digital Academy moves to professionalise clinical informatics and recognise this key TEC role alongside other clinical pathways.

"If you think about how EPR has developed in the past it has tended to bubble up from the floor from what you could call the 'hobbyists' – people who are really passionate about one thing in one area. What we as CCIOs need to do is pull those projects together an get them aligned with the wider organisational strategy."

Gareth Thomas, Chief Clinical Information Officer, Salford Royal NHS Foundation Trust

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Roles Change

In Unity Health - where three GP practices have gone digital first: nurses are triaging patients every day and acting as navigators/advisors. Ensuring patients access the right support and care and only see a GP when they need to.

The role of GPs has changed as more time is freed up for more complex patients. They can now offer 20 minute appointments and invest more quality time.

"User centred design is an important part of the agenda for the staff as much as anyone else. We want to move to more rigour – of tried and tested innovation, adoption and transformation where the impact has been measured and understood – so that ultimately we can point people to the right things with confidence."

Harpreet Sood, Associate Chief Clinical Information Officer, NHS England

Change principles for leadership

Systems Change

Leaders need to adopt systems change mindset and approach if they want change to spread. They need training, development and support to enable them to do it and they can't do it in isolation. CEOs and boards need to follow suit. Organisations and individuals must think of themselves as an integral part of the system that works together, not a network of separate bodies.

"We must unashamedly demonstrate the art of the possible using the work of the Global Digital Exemplars, but at the same time strike the right balance between central leadership and local innovation to ensure new ideas emerge whilst minimising variation and duplication."

Keith McNeill, Chief Clinical Information Officer, NHS England

Trust

Trust works both ways - leaders must trust individuals and local and regional networks to organise themselves effectively and introduce useful innovation, whilst staff must trust leaders to put people first, allow them to introduce changes and learn from failure without feeling blamed.

Proof of Concept

Systems must be designed with a learning culture rooted in shared experience, and the ability to introduce small-scale innovation on an on-going 'test and learn' basis. Leaders should make the collection of examples of learning and best practice an essential part of their day-to-day role.

Getting the money right and keeping an eye on the future

Last but not least, money is a key consideration. Leaders find it difficult to roll out the right kind of change when the money is the wrong 'shape' (when capital allocation impacts ongoing revenue like VAT and resourcing, or implementation costs are overlooked), or when funding pathways are opaque or inflexible. This handcuffs regional and local leaders who are trying to ensure they have the right skills in the right place.

"The one thing that would really help me now is to make revenue money rather than capital money available for me to buy what I need. The shape of the money is of vital importance to us – I can't stress that enough."

Steve Grey, Clinical Systems Programme Director, University Hospitals Bristol NHS Trust

Conclusions

1. Position the CIO as the Hacker In Chief on the Board and the right hand to the CEO – TEC should be part of the every day and everything.
2. Leaders should aim to build a 'hack', not hierarchy', culture and empower the people in the system to act.
3. Invest in and recognise the leadership role of the CCIO/CIO, and the skills and support they need. They are pivotal to the future of the NHS and care; we should make them world leading.
4. Develop a broad ranging recruitment, training and development plan.
5. Boards and organisations need to embrace a systems change mindset and embed it in the culture of their organisations, not just for TEC but to achieve wider change too.
6. The NHS should become the place to be for the best talent in data analytics and technology – more should be done to attract and inspire them to join.
7. Empower Generation Y.
8. Ensure the money is there for implementation and not just capital – it's not enough to simply have the technology. The humans make it possible.

3 steps to support systems change, with 3D

TEC is fundamental to the transformation and the future of our health and care system. Making it possible will be down to how we work together to achieve a collective common goal.

"The system needs shared clarity of vision and purpose, to understand each other, to apply a 'hack mindset', and focus on the power of the collective. We need to encourage leadership, which facilitates rather than dominates, build courage and commitment to the cause, even when the going gets tough, be clear about the why, what, when and how, and connect the people end to end. By building a culture of trust, mutual respect and confidence to test and learn, and being prepared to invest the time in getting it right, we have the potential to save lives and money too."
Claire Cater, Social Kinetic

The learning here matches that from when developing 3D (to enable change) with staff and leaders across the health and care sector. Leaders could use this as a framework to enable their journey.

Find out more here.

Step 1

Develop a shared vision and purpose

This applies to multi partner systems as much as internal teams. Ensure it is clear and the purpose spells out what you are aiming to achieve, together with the benefits for those involved.

Map your ecosystem

The people, teams and organisations that are part of your vision. Whether it's redesigning a pathway or joining up partners across an STP, you need to know who they are, the roles they play now (and could play in the future) and their needs – contraints and strengths. Where is the alignment and where are the gaps?

You need to do this together, there are no shortcuts.

Agree where you are heading and understand who you are working with and how you might get there.

Step 2

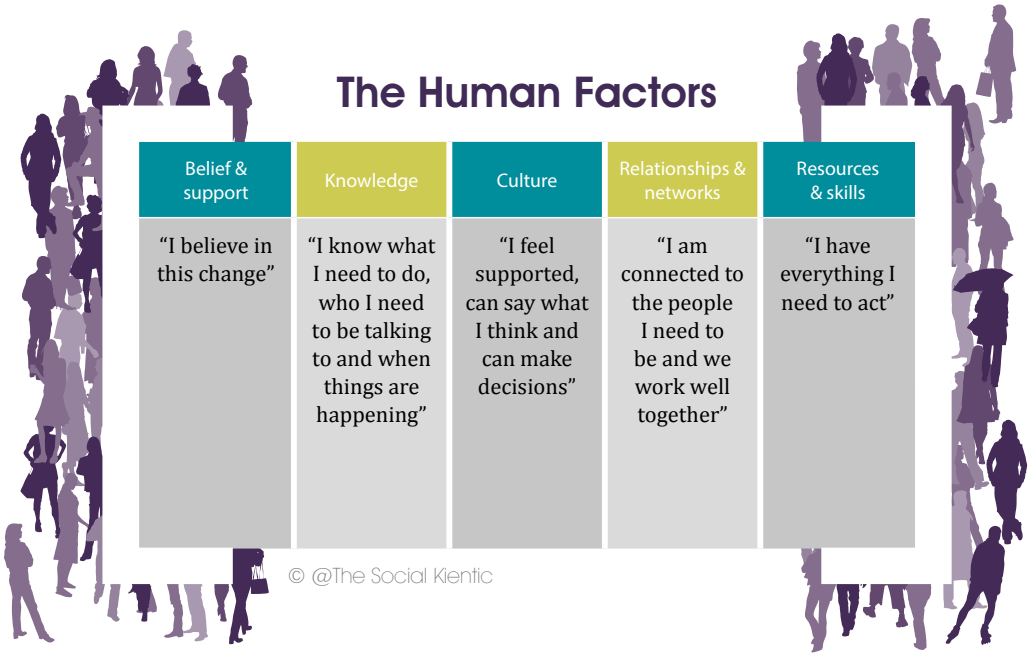
Understand your human factors. Are they aligned?

Once the vision and purpose are clear, you need to understand how aligned the rest of the 'players' are too (individuals, leaders, organisations, partners) and how ready and able they are to deliver. You need a picture of your human factors across the system and within organisations and leadership teams. What are the answers to the statements below?

Step 3

Collective plan

You need to come together and review how your human factors align with your vision and purpose. Discuss the findings, build on the strengths and address the gaps. Make a collective plan. This test and learn approach should be repeated regularly with a snapshot of where you are now.



Chapter 1

2. Sharing the learning

Inspiration from the front line

> "No project or problem is 100% unique, it's our obligation to look for others who have done things before us and to learn from them whether that is in health and care, elsewhere in government or in the private sector. As leaders we can and should remind our teams and our organisations that we'll only achieve our goals if we look outwards and seek to collaborate across organisational boundaries and geographies to deliver the step change we require. We need to continually listen and adjust our plans as well as be generous in sharing our own knowledge and experience."

Eve Roodhouse
Director, Implementation and Business Change,
NHS Digital

Cambridge University Hospitals NHS
NHS Foundation Trust

Adopting a systems change mind-set:
Paper pusher to digital pioneer,
an eHospital journey

Great Ormond Street Hospital

Adopting a hack mind-set:
An early warning tool offering
24/7 peace of mind for clinicians

Unity Health NHS

Clarity of Vision and Purpose:
Digital first means GPs have
more time for patients

Salford Royal NHS
NHS Foundation Trust

Salford Royal NHS Trust, the place to be:
Skilling up for a digital future

Barking, Havering and Redbridge University Hospitals NHS
NHS Trust

Case note tracking:
A simple solution to a well known challenge

More to come...

Adopting a systems change mind-set:
Paper pusher to digital pioneer, an eHospital journey

Cambridge University Hospitals NHS
NHS Foundation Trust

Nearly three years ago Cambridge University Hospitals NHS Trust (CUH) was classed as having 'minimal digital adoption on the HiMSS Electronic Medical Record Adoption Model (EMRAM). Today, after a three-year transformation journey, it is recognised as one of the most digitally advanced providers in the country.

Procuring a paper alternative

The move from traditional paper-based record keeping to an integrated electronic health record (EHR) system was a long, and at times, difficult but ultimately rewarding journey.

After a comprehensive international procurement in 2011, the Trust embarked upon its 10-year, £200 million eHospital programme in 2013. £40m was to install the Epic HER, £140m was with HP Enterprise to provide a stable platform to support the EHR – including mobile devices and entire network and desktop refresh across the Trust – and the remaining £20m was the Trust's own implementation costs to provide the necessary staff and resources to deliver the project.

L There was clarity of the vision and the purpose

After 18 months the EHR went live

Eighteen months after signing the contract, CUH went live with the EHR system at its Addenbrooke's and Rosie hospitals on the Cambridge Biomedical Campus.
The project required the training of approximately 12,000 staff and the installation of 6,750 personal computers, 500 personal laptops, 395 workstations on wheels and 420 hand-held 'Rover' (iPod touch) devices.

Adopting a radical and supported approach

After a detailed options appraisal the CUH board opted for a significant up front IT investment rather than simply replacing outdated technology as it became obsolete.

Staff engagement, training and secondments were key to the successful co-creation and implementation of eHospital.

Realising the potential benefits early on, it was CUH clinicians that helped obtain business case approval, enabled new IT equipment to be deployed in all areas of the Trust, encouraged dress rehearsals and readiness assessments to take place and ensured essential input into the EHR configuration prior to go-live and beyond.

Over 100 clinical and administrative staff from various clinical areas were seconded to the eHospital team in 2013, and so the EHR was built by CUH staff, for CUH staff – an essential piece of staff engagement.

Prior to go-live, demonstrations of the new system were presented to staff, a dedicated weekly eHospital newsletter was sent electronically to trust employees and a public website was launched to help inform stakeholders and patients.

Detailed review of pathways

Over 250 sessions were held with 1,000 clinicians and administrators to validate some 500 major clinical pathways to ensure that the system configuration incorporated the correct CUH workflows as well as local, professional and national guidelines. All major clinical workflows and pathways in the Epic Foundation System were reviewed by clinical teams across the Trust. Over 90% were acceptable to use at CUH, with the remaining workflows adapted by the eHospital programme team to suit the NHS and CUH.

Extensive time invested in training

On top of that more than 175,000 hours of training was delivered to the 12,000 staff over a nine-week period leading up to go-live. Approximately 2,500 staff also volunteered to become 'super users', and were given extra training in how to support their colleagues with how to use the Epic EHR.

L

The leadership were committed to test and learn, even when things got tough.

There was a culture of respect and inclusivity, involvement of the staff throughout and investment in the training, communications and support.

Dress rehearsals and risk assessment

Trust leadership played an important role in the transition, with 120, 90, 60 & 30-day pre go-live eHospital readiness assessments carried out with oversight from senior clinical and operational leads within the Trust. Regular specialty-level risk assessments and a series of dress rehearsals in clinical areas and across high-risk patient pathways were also conducted. Senior leadership were vital in preparing hospital staff for go-live and ensuring that staff in their area were all trained.

Bumps along the road

The big bang launch approach was not without its challenges.

Six months following the installation, the Care Quality Commission (CQC) published an inspection report identifying eight areas across the trust requiring 'focus for improvement', including the use of the Epic system and IT support.

Issues identified included some confusion in a limited number of areas about how to balance the new digital systems with remaining paper records, and a decline in productivity, particularly in hard-pressed services such as dermatology, cardiology, ophthalmology and ENT.

By April 2016, however, most of the problems had been ironed out and the Trust has seen a marked shift in the ability of staff do more digitally for the benefit of their patients.

Key challenges/learnings:

- For some staff, the switch from paper to digital was not simple – even though they had access to exactly the same information that they had always used to do their jobs, but now just presented in a different way within an electronic system. So the need to prepare staff from the outset about the scale of the transition is really important.
- Workflow-based training would have been more suitable than activity / role-based training – or a combination of both.
- Be prepared – things will not necessarily be perfect first time, you need to test and learn quickly
- Support in the form of floorwalkers during the go-live period proved invaluable.
- Real-time support at go-live from our suppliers (Epic and HP), to resolve issues as quickly as possible, also proved invaluable.

> ***"You can see what everyone's written and what's been ordered, as it happens. Documentation is easier to read, as we're not struggling with poor handwriting, and everyone is finding the process much easier now."***
>
> **Chinga Chileshe**, Consultant

Reaping the benefits

The Epic EHR system has brought all of CUH's administrative and clinical information relating to a patient in to one place, recorded in real time, improving quality, reducing duplication and eliminating unnecessary delays to patient care.

- Patients do not have to stay in hospital for longer than they need to as the time it takes to prepare discharge medications has halved (from 90 minutes to 45 minutes).
- Electronic prescribing has resulted in a 100% reduction in sedation-related prescribing errors in the paediatric intensive care unit.
- 16% of allergy-related prescribing alerts have led to a change in prescription, **saving 2,450 bed days a year (equivalent to £980,00) and improving patient care by avoiding adverse drug reactions.**
- To improve patient safety, every inpatient now has a barcoded wristband which links directly to the Epic EHR. Barcode-enabled medication administration in paediatrics also improves safety further and allows nurses to use handheld devices that are also directly integrated with the EHR.
- Changes in workflow supported by the system are also evident – an electronic sepsis alert workflow, has resulted in an **80% increase in patients receiving antibiotics for sepsis within 90 minutes of arriving at our emergency department.**
- The routine review of best practice for intensive care ventilator tidal volumes through automated decision support algorithms is now **saving 2-3 avoidable ventilator related deaths per year.**
- Clinicians can now also review notes and x-rays virtually. In orthopaedics this has **freed up 4,500 appointments a year** so only patients that actually need to attend the clinic for treatment are sent an appointment, and in addition adherence to best practice tariff in hip replacement care has risen from 66% to 82%.
- Patients attending the surgical pre-assessment clinic complete their own initial documentation using kiosk like software on tablets, meaning the **pre-assessment area now sees approximately 20% more patients than before**.
- Finally, integrated handheld and mobile devices enable clinicians to document information in the Epic EHR system at the patient's bedside and in real time, allowing them to spend more quality time with patients and improving patient experience.
- Overall, CUH estimates that it now s**aves est £460,000 annually in staff tim**e from eliminating the need to retrieve paper notes, as well as **£655,000 saved each quarter in charting costs**, thanks to device integration.

"I like how safety has improved on drug rounds thanks to eHospital. It's easier now to know who's done what, and when."

Rosario Hermida, Senior

Looking to the future

With the eHospital programme bedding in, CUH is looking to expand the EHR to link with other parts of the care system and empower patients to take more control of their own health.

Epic's Care Everywhere and EpicCare Link functionality will enable records to be joined up with other trusts and primary care, while the MyChart patient portal add-on is enabling patients to securely view aspects of their medical record, including: upcoming appointments, test results, correspondence and medications.

The Trust also working to achieve EMRAM Stage 7 status.

"The achievements to date are a true testament of everyone's hard work and continued success in providing high quality patient care through our digital programme, eHospital. A key part of eHospital is our Epic electronic patient record system, which has become an essential tool in assisting our clinicians to provide better patient care. Built by our clinicians for our clinicians, it enables them to view a patient's medical record in its entirety, electronically, whenever and wherever they need to without having to wait for or write in paper notes.

"We were the first Trust to introduce such a large-scale and advanced digital programme, and the first to achieve HiMSS (Healthcare Information and Management Systems Society) Stage 6 within a year of a fully integrated electronic patient record system going live. We have learnt important lessons over the years which have helped us to develop, and from which the rest of the NHS will benefit as we all work towards the Government's target of a digital NHS."

Dr Zafar Chaudry, Chief Information Officer (CIO), CUH

Adopting a hack mind-set: An early warning tool offering 24/7 peace of mind for clinicians

Great Ormond Street Hospital

Staff at Great Ormond Street Hospital have developed an electronic clinical communication tool to provide an early warning system for deteriorating children in their care. As result clinicians can receive early warning and care can be escalated quickly.

The trust has partnered with software supplier Nervecentre to provide electronic observations, patient task management, handover and messaging.

Early warning scores alert clinical staff that urgent attention is needed

Funded by the Safer Wards, Safer Hospital initiative (Integrated Digital Care Fund), nursing staff and doctors each use the software on an iPad or iPod touch to record and monitor patient observations direct at the bedside. Key functionality includes calculating Early Warning Scores, which intuitively alert individual clinical staff that urgent attention is required and cascade results to the specified care team.

24/7 smooth transition of accurate clinical information

The solution provides a robust task management and handover system used by both doctors and nurses, 24/7, which ensures there is a smooth transition of accurate clinical information for continuous patient care including advanced escalations. It also enables the hospital to significantly increase communication between clinical staff and teams within the hospital and to have instant visibility of each patients 'real time' condition; all of which form part of the hospital's long-term 'recognising deteriorating children' project.

Process mapping, training in real time and round the clock support for trouble shooting

Ahead of the official go-live, the Trust ran process-mapping workshops with staff, to identify areas where they felt support would be needed. A ward area that received the highest number of clinical emergency calls was chosen for a proof of concept. Pre go-live training sessions were held, but the majority of training was done in real-time, with nurses and doctors popping into a dedicated 'mobile training room'. Round the clock support was provided to quickly identify any issues staff were having and the trust approached a nursing agency for trainers, guaranteeing them work for the roll out period.

Proven clinically and by audit to have benefited all groups of staff, the Nervecentre solution has provided improved visibility of patients for all teams and speeded up the response time of clinicians. A full electronic audit of clinical tasks and observations ensures nothing is missed.

Cost-savings to date include £12,000 per annum through **the elimination of 51,000 paper charts** and associated scanning, **5,200 nurse hours saved per year** and the elimination of 50,400 Children's Early Warning Score (CEWS) alerts per year at a cost of £77,070.

Responding to the enthusiasm and empowering staff to get involved

One of the biggest challenges of the project was keeping within scope. As it developed, medical teams and nurses were bringing ideas for using within the system, then requesting development of their innovations – for example, the renal team developed a hypertension chart to detect changes in their patients early.

To overcome the challenge the Trust set up a dedicated ideas email address to collect suggestions to present to the Project Board, giving people a voice. It also allowed the opportunity to open workshops, giving everyone a chance to engage with the system. There is now a systems administrator and trainer employed within the trust.

Recognising and responding to the deteriorating patient is a well recognised national and international patient safety issue. The clinical teams required a real time system that would assist them in early recognition and prompt escalation of our patients. This tool has supported bedside nurses in identifying risk factors during their routine assessments thus improving the care of our patients. Clinician feedback on the pilot has been very positive as the system gives us maximum visibility of all patients wherever you are in the hospital and enables us to instantly deliver accurate information and automated alerts to clinicians throughout the day or night."

Sarah Newcombe, GOSH Clinical Site Practitioner and Project Clinical Lead.

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Taking a test and learn approach, ensured they resolved challenges quickly and collectively. The creation of 'proof of concept' built trust in the approach/technology. This is imperative when the role it plays is so critical.

There was connectivity between the people involved and they were given the support they needed.

Great Ormond Street has been recognised as a 2017 NHS Digital Pioneer Award finalist, an initiative sponsored by DigitalHealth.London and supported by the NHS. Visit DigitalHealth.London for more information.

Sarah Newcombe has been recognised as a 2017 NHS Digital Pioneer Award finalist, an initiative also sponsored by DigitalHealth.London

Clarity of Vision and Purpose: Digital first means GPs have more time for patients

Unity Health NHS

Faced with a growing number of patients dissatisfied that they were unable to get an appointment with their GP, a forward thinking GP partnership in Yorkshire looked online for a solution.

Many patients at Unity Health's surgeries in York were waiting up to three weeks for an appointment.

The practice had introduced a walk in service with 50 appointments every morning but high demand resulted in reception staff turning away at least 10 patients every day.

Only a very small number of its 24,000 patients – around 11% - were using Patient Access to book appointments and 'did not attend' (DNA) had risen to 10%.

Health receptionist Lauren Cowling helping a patient with the online consultation system

Exploring digital solutions

After scoping a range of web-based consultation options, Unity Health chose eConsult, by webGP, an online triage and consultation tool for general practice. Patients were offered the online consultation option as a means to access their GP and were able to use it at any time of day.

Although a significant number of patients were happy to use the new system overall satisfaction levels dipped significantly because patients were still being told that they may have to wait two to three weeks for a physical appointment.

> ***"Our audit showed that patients would often book GP appointments for conditions that didn't necessarily need GP input, like coughs, colds and sore throats. But because it was open access, we had no control over it, and this was partly why there was a three week wait. By implementing only a partial solution to patient access needs, we hadn't resolved the issue of appointment availability and had actually increased dissatisfaction. We knew our receptionists were taking the impact from patients when their expectations were not being met."***
>
> **Louise Johnston,** managing partner at Unity Health, part of Nimbus Care Ltd

Tackling appointment availability

Unity Health then took the bold decision to revolutionise patient access by directing all patients down the online route in the first instance.
After trialing 24/7 access to online consultations, the team soon realised that the early morning spike in activity – particularly from student patients from their University campus practice – was too hard for the team to manage.

Opening the system during practice hours didn't allow working patients enough opportunity to access the service, so after weeks of live testing, Unity Health opted to enable the service between the hours of 7am and 8pm.

Louise Sissons, Unity Health practice nurse, triages patients as they complete the online consultation

Go live, communications and engaging staff

Following three months of planning, the partnership went fully live with online consultation on 19 September 2016.

Communicating the change was a priority and included staff and patient engagement events, leaflets, social media, text and email.

Although staff understood the benefits of the new access model in terms of moving forward, it was initially a real challenge to engage them.

> ***"Patient involvement and raising awareness is vital. It's worth checking your communications with patient groups to make them feel involved right from the start. Begin communicating the changes early and use every method possible to keep people informed. Also, we would recommend getting staff to test the system too before you launch. The algorithms are written by GPs, so we encouraged" our staff to pretend to be a patient and put the system to the test."***
>
> **Louise Johnston**, Managing Partner, Unity Health

Initially it added to GP workload

The partnership found that the new system initially added to GPs' workload and they had to experiment to decide the most appropriate time for the e-consultation portal to be available.

Reaping the benefits

- Now that the system has bedded in, and patients are familiar with it, the practice is working more efficiently and patient satisfaction is on the up.

  Currently 87% of patients contact the practice via the e-consultation route. Others go into the practice and use the ipad at the reception desk with the help from the receptionist.
- By deciding on the most appropriate course of action for the patient, the team of nurse practitioners have been able to free-up GP appointments for those who really needed them.
- High-risk patients are now offered 20 minute appointments because the system is freeing up GPs' time and DNA rates have dropped to 2%

Prioritising high risk patients

One group that benefited was a cohort of 500 high-risk patients with complex needs.

"We decided this group could have a direct dial phone number to the nurse triage team because we felt it was inappropriate to ask them to fill in an online consultation form," said Louise.

This group of patients are very happy and reassured by the new system as they can get straight through to the team and are able to be seen quickly.

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Commitment to the goal was imperative. The test and learn approach is built in and ongoing. Taking staff, clinicians and patients on the journey and investing the time in getting it right has paid dividends.

Patient Maurice Bridge, 79, is one of Unity Health's high-risk patients. He has been a patient at the practice since 1963 and is a regular visitor.

"I'm ok because I have an ongoing condition and my wife just rings the direct line and they sort it! I know some people aren't happy with the new system, but it's just the transition from one system to another and some people don't like change – they just need to get used to it. When you have been a patient as long as I have, you worry about losing the personal touch," he said.

WebGP allows patients to:

- Access online information on certain conditions
- Request general advice from a clinician
- Get administrative help

Selecting general advice asks patients to complete an online questionnaire which is reviewed by the nurse triage team. The team contacts the patient by the end of the next working day

They will referral to pharmacy etc)

- Appointment with a nurse or other healthcare practitioner, or
- Appointment with a doctor

Salford Royal NHS Trust, the place to be:
Skilling up for a digital future

Salford Royal NHS
NHS Foundation Trust

Difficulty recruiting and retaining the right people to delver the digital agenda is a recurring theme amongst CIOs and CCIOs.

At Salford Royal Foundation NHS Trust (SFT), however, a combination of innovative external recruitment and structured internal staff development is helping to reduce turnover, lower sickness rates and at the same time identify the next generation of informatics staff.

Combating the understanding gap

To combat the understanding gap, SFT began a sandwich student programme eight years ago. **Each July, two undergraduates join the informatics team for their 12-month industry placement, working on a range of different projects across the 130-strong IM&T team.**

Students are provided with learning and development, undertake set tasks and are given the opportunity to undertake a project specific to an area they have interest in. They learn how informatics functions within the NHS and more specifically within Salford Royal. This helps to advance their current IT skills set to develop their informatics skills. Learning modules include:

- IT Skills Pathway
- Moodle eLearning - online and face-to-face sessions
- Leadership programmes
- Informatics Skills Development Network
- Face-to-face bespoke sessions based on specific skill sets, and
- Buddying/mentorship to build experience and confidence.

"One of our main problems over the years has been that people don't really understand what informatics is. If you say you work in finance or nursing people instantly have an idea of what you actually do, but say informatics and the default position is to think that you're on some sort of service desk."

Debbie Mort *Programme Management Office Manager*

Working with schools and colleges

Members from the teams within informatics also attend various recruitment sessions at both schools and local colleges to advertise the opportunities which are available to gain hands on experience whilst starting or continuing their learning in IT.

Recently the team attended a session at Manchester NHS Careers Day for school leavers in years 10 and 11. The team spoke to school leavers to show them that IT was much more than just sitting behind a desk looking at a computer screen.

They demonstrated how IT is the backbone of ensuring that clinical staff have the resources and support needed to care for patients – they also demonstrated the different pathways and opportunities that can be undertaken, based on what they find interesting – these career pathways are not set, they are fluid and opportunities are always available.

"We show them the full spectrum of informatics skills, from data analysis and business intelligence right through to performance reporting and project management," Mort explains. Since the initiative was launched, the majority of the 14 former students have gone on to take up informatics roles with North West NHS organisations.

SRFT is also tapping into younger potential talent through its involvement with the Princes Trust and the national apprenticeship programme. Two apprentices are already working on site and The Trust is looking to support six Princes Trust students for a six-week placement within IM&T with the potential that some, if not all, will transfer to an apprenticeship.

Close ties with higher education

Close ties with local higher education providers mean that current IM&T staff can enroll on degree courses at Manchester Metropolitan University, while the Trust is also looking to work with private sector partners such Manchester Digital and Softcat as it seeks opportunities for developer apprenticeships and greater insight into private sector ways of working.

More recently the Trust has supported two five-month Informatics Clinical Trainee placements and are hoping to make it a longer term initiative. The placements are aimed at showing Masters students how informatics can support frontline research and clinical practice.

"The trick is to develop a suite of opportunities," says Mort. "We know that to get the best people out there and keep them we need to provide opportunities across IM&T – that's everything from being flexible about things like shadowing and work experience to the provision of external development support for aspiring leaders. It's about professionalizing the work that informatics teams do within the organisation and the wider system."

Sharing the learning

Tips and lessons from SFT's multi faceted recruitment and retention approach is shared across the wider patch through the North West Skills Development Network, a cross organisational body created to share best practice in the fields of informatics, finance and procurement.

The results for STF have been impressive. Staff turnover within the IMT function is 10.3% against a Trust average of 10.9%, whilst year to date sickness absence is just 1.74% against a Trust average of 4.28%.

Notes

Case note tracking: A simple solution to a well known challenge

Barking, Havering and Redbridge NHS University Hospitals NHS Trust

Barking, Havering and Redbridge University Hospitals NHS Trust (BHR) had a lack of visibility of any real case note activity. Activity reporting was labour intensive and of limited value, making it difficult to identify and address root cause issues. 10% of health records were not available at the point of care, resulting in cancelled or ineffective patient appointments.

IM & T Programme Director, Andrew Raynes, supported the successful implementation of The iFIT iRECORDS system (6PM). This case note tracking solution utilises Radio Frequency Identification (RFID) to passively track health records as they travel around the Trust, providing visibility of their location at any point in time.

Introducing this technology has resulted in a 700% efficiency improvement in filing records, with tangible outcomes and benefits including absorbed impact of 12% increase in elective admissions; 20% efficiency increase in pulling records (per hour); 75% improvement in the time taken to track records; and a reduction in creation of temporary records, from 85 per day to 41 per day.

> *"The ability to locate missing records using the guns is proving to be invaluable and has helped us when working to very tight deadlines."*
>
> **Tina Harris**, Subject Access Co-Ordinator

"We have seen a reduction in temporary notes and misplaced notes in clinic due to being able to find notes with the RFID guns. It has been so successful, we are looking to invest in more passive scanning points across the Trust to realise further improvements."

Patricia Safety, Clinic Prep Co-ordinator

Andrew Raynes was a finalist for the 2017 NHS Digital Pioneer Award for Sustainability through Digital; an initiative sponsored by DigitalHealth.London and supported by the NHS England. Visit DigitalHealth.London for more information.

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