NHS 70 YEARS OF THE NHS 1948 - 2018

Norfolk County Council

Norfolk and Waveney STP Digital Strategy

2019 - 2024

in good health

Introduction

The Norfolk and Waveney STP digital strategy outlines the ambition of the Care System to deliver care in new and innovative ways for our patients and citizens. Digital Care refers to transforming the way we deliver care in a sustainable, efficient and effective way utilising technology, infrastructure, devices and information. The challenges we face in the health and care service are well known – we strive to improve our clinical quality, operational performance and financial management. Now is the time to think in a different way to deliver our ambition.

The people of Norfolk expect technology and information systems to be part of how health and care services are delivered, they are enthused about how we could embrace the opportunity to make people's experience and use of services more straightforward, personalised and interactive, as they expect in other areas of their lives.

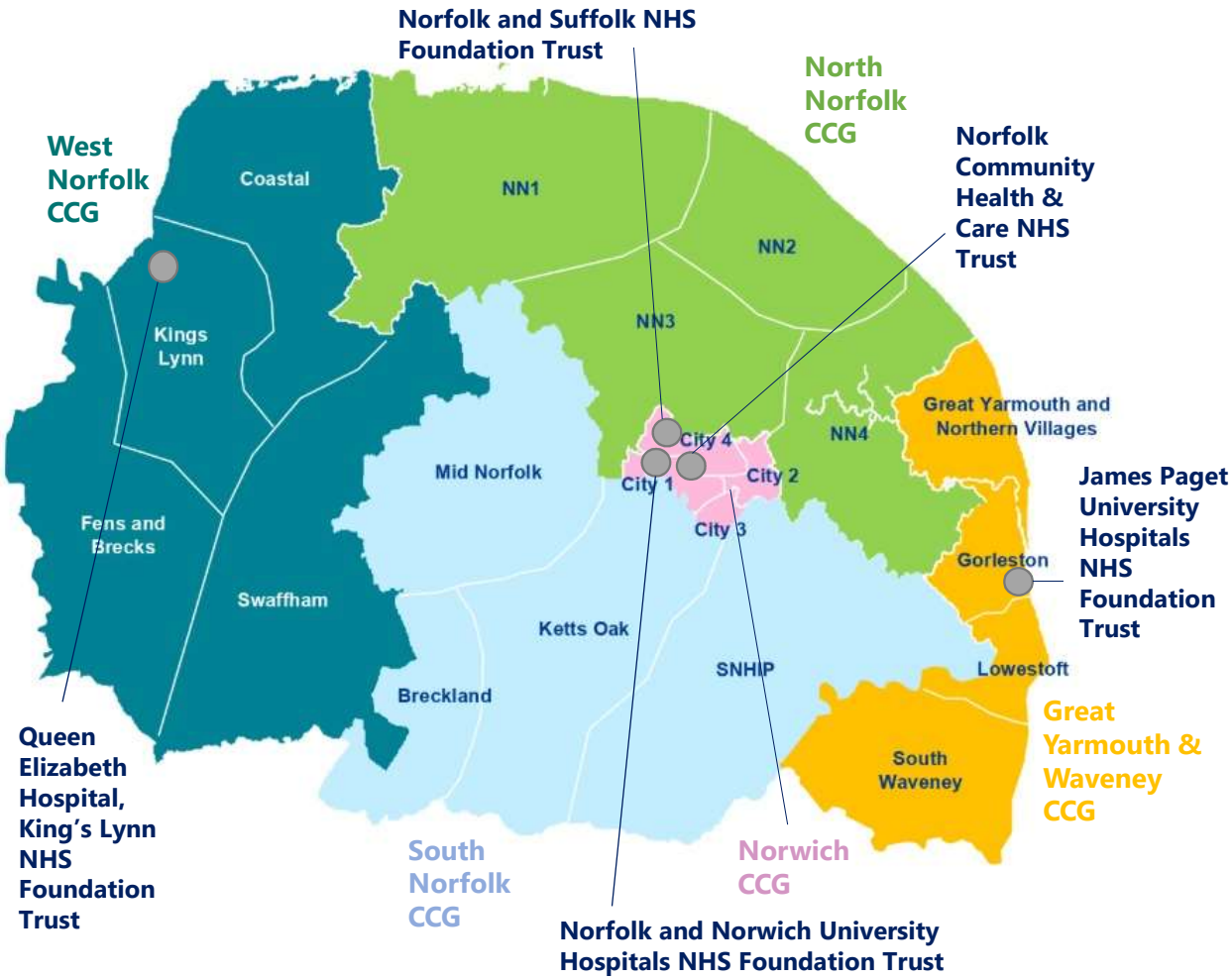
Anthony Lundrigan
Chief Information Officer, January 2019

N&W STP Geography

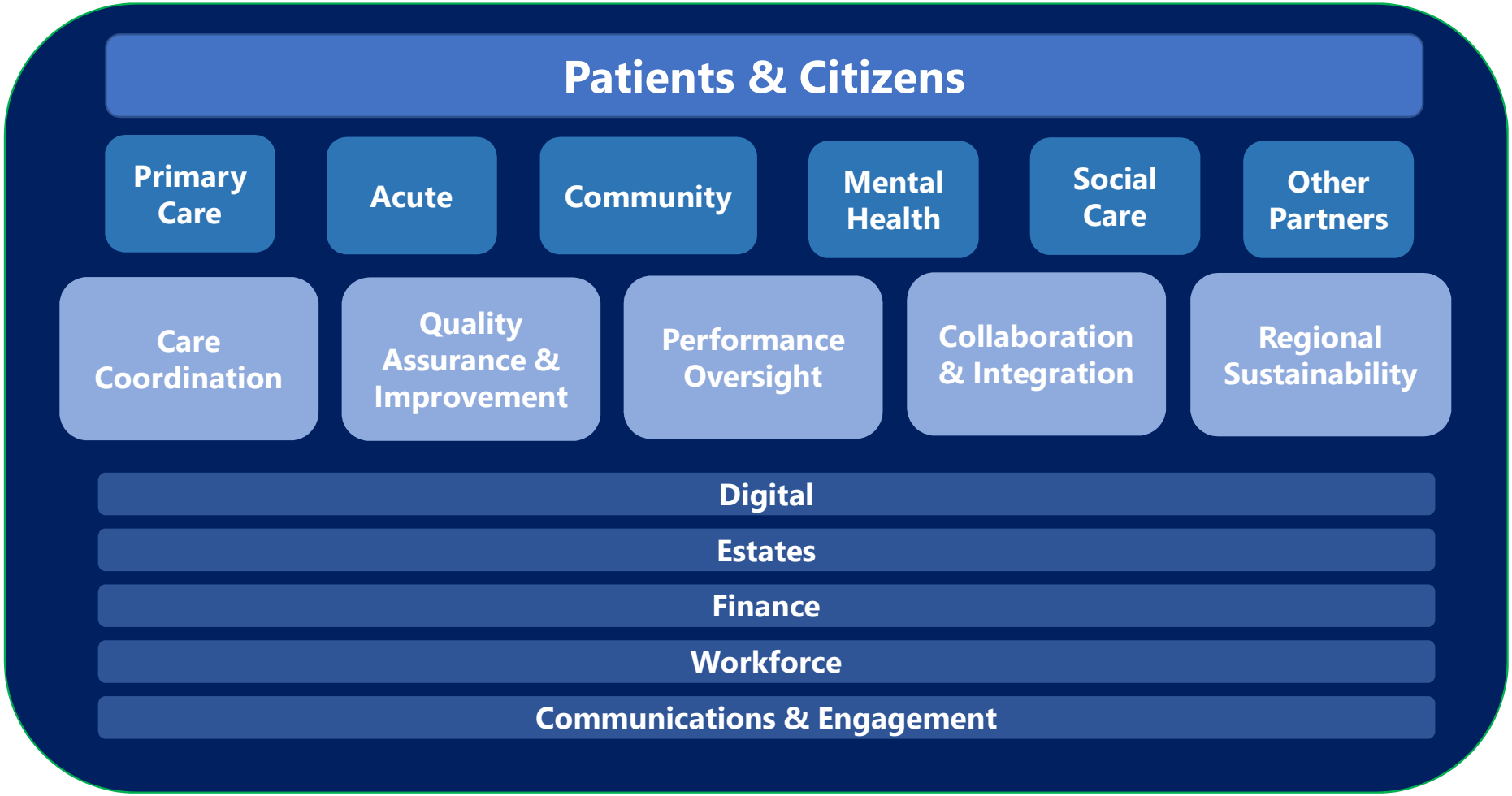
Norfolk and Waveney STP is made up of;

- **5 CCGs**
- **5 Local Delivery Groups (aligned to the CCGs)**
- **20 Primary Care Networks**
- **3 Acute Trusts**
- **1 Community Trust**
- **1 Mental Health Trust**
- **1 Ambulance Trust**
- **GPs**
- **Social Care - NCC**
- **Public Health England**
- **Volunteer and Third Sector**

(see Appendix 1 for a full STP list partner list)

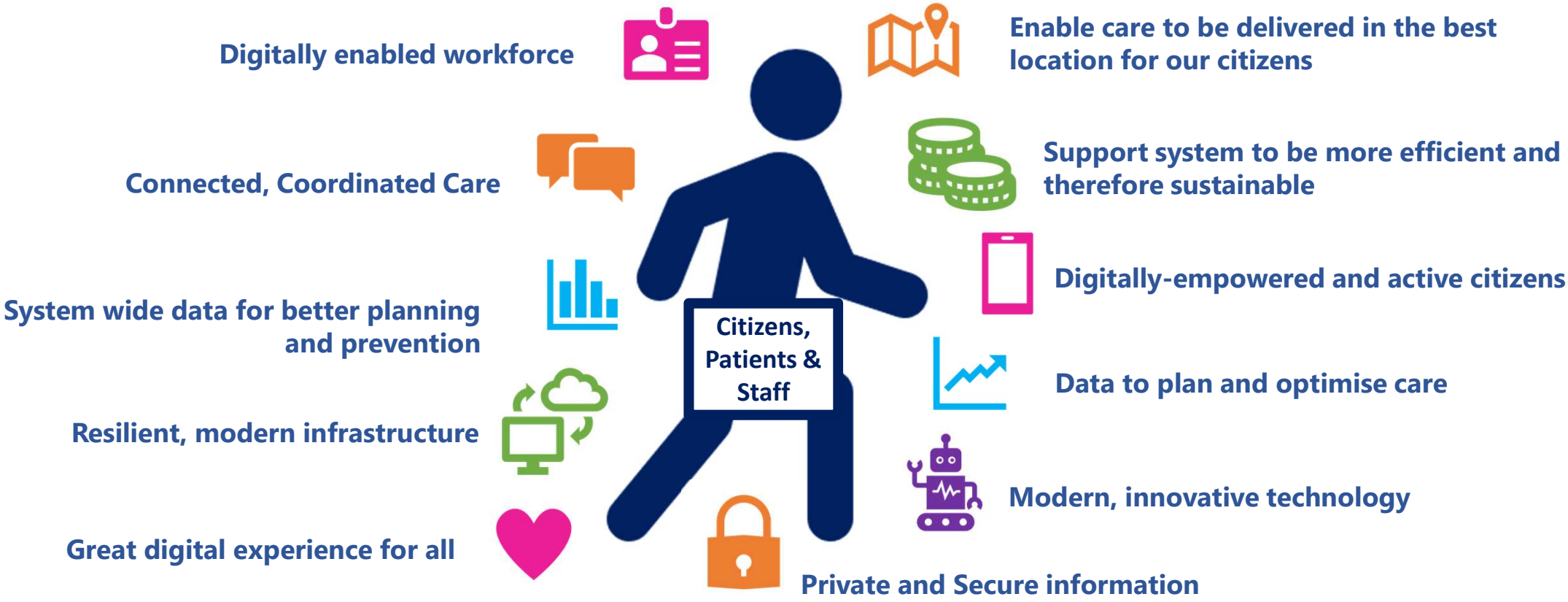


N&W STP Remit


Patients & Citizens
Primary Care
Acute
Community
Mental Health
Social Care
Other Partners
Care Coordination
Quality Assurance & Improvement
Performance Oversight
Collaboration & Integration
Regional Sustainability
Digital
Estates
Finance
Workforce
Communications & Engagement

Digital Health & Care

Digital Health and Care is a convergence of multiple technologies and tools to enable modern, efficient, high quality care for our citizens and patients. For us Digital Health and Care covers areas such as;



National Context

General

In January, 2019, The Government published the NHS Long Term Plan. The plan sets out a vision for new service model that renews its focus and provides additional funding for primary and community care. The plan focuses on:

1. The new service model
2. Prevention and health inequalities
3. Care quality and outcome improvements
4. Workforce
5. Technology and digitally enabled care
6. Financial Sustainability

"As medicine advances, health needs change and society develops, so the NHS has to continually move forward so that in 10 years' time we have a service fit for the future."

NHS Long Term Plan
January, 2019

"Technology will play a central role in realising the Long Term Plan"

NHS Long Term Plan
January, 2019

Digital*

For the first time, digital health is an integral part of the Government's NHS plan. As well as having its own section, digital health is mentioned in every section as a supporter or enabler of success. The plan discusses 'wide spread digital services', a plan for a 'digital first' model of care in primary and community sectors, and sets out an aim to give 'our hospitals the most advanced IT in the world'. Its objectives are to:

1. Empower People
2. Support Health and Care Professionals
3. Support Clinical Care
4. Improve Population Health
5. Improve Clinical Effectiveness and Safety

*See Appendix 2 for more National Digital Context

Local Context

General

Norfolk and Waveney STP is aspiring to be an Integrated Care System (ICS). By April 2019, we will set out our intentions for 2019/20 and by Autumn 2019, we will have created our full, five year plan.

The region faces multiple challenges including an ageing and older than average population, vast rural areas, difficulties attracting staff to the region, a number of poorly performing organisations and region-wide financial difficulties.

The N&W STP has a CEO, Director of Operations and CIO in place and is looking to grow the team further in 2019.

"Despite a significant improvement, we still face a number of challenging targets so will not be complacent."

Melanie Craig , N&W STP CEO
May, 2018

"A health tech revolution is coming."

Matt Hancock
Health Secretary
Twitter, January 2019

Digital

Our region has been identified as the least digitally-mature in the country. Our system is still heavily reliant on paper processes and the manual efforts of our staff to keep communication, patient information and care processes flowing.

The N&W STP has a Chief Information Officer in place (joint role with Norfolk and Norwich University Hospitals NHS Foundation Trust) which is testament to its focus on digital health going forward.

Each STP partner also has its own digital agenda (see Appendix 3 for more information).

Digital Maturity

According to latest NHS Improvement figures (2018), Norfolk and Waveney STP is the least digitally-mature STP in the country.

This has massive implications for the health of our population and the sustainability of our system. In 2019, N&W STP will be undergoing a HIMSS review. Our aim is to be a HIMSS Stage 7 STP by 2024.

This supports the NHS Long Term Plan aim of a core level of digitisation by 2024.

"All providers will be expected to advance to a core level of digitisation by 2024"

NHS Long Term Plan Jan 2019

HIMSS Analytics Continuity of Care Maturity Model	
STAGE 7	Knowledge Driven Engagement for a Dynamic, Multi-vendor, Multi-organizational Interconnected Healthcare Delivery Model
STAGE 6	Closed Loop Care Coordination Across Care Team Members
STAGE 5	Community Wide Patient Record using Applied Information with Patient Engagement Focus
STAGE 4	Care Coordination based on Actionable Data using a Semantic Interoperable Patient Record
STAGE 3	Normalized Patient Record using Structural Interoperability
STAGE 2	Patient Centered Clinical Data using Basic System-to-S
STAGE 1	Basic Peer-t
STAGE 0	Limited to N

STAGE	HIMSS Analytics EMRAM EMR Adoption Model Cumulative Capabilities
7	Complete EMR; External HIE; Data Analytics, Governance, Disaster Recovery, Privacy and Security
6	Technology Enabled Medication, Blood Products, and Human Milk Administration; Risk Reporting; Full CDS
5	Physician documentation using structured templates; Intrusion/Device Protection
4	CPOE with CDS; Nursing and Allied Health Documentation; Basic Business Continuity
3	Nursing and Allied Health Documentation; eMAR; Role-Based Security
2	CDR; Internal Interoperability; Basic Security
1	Ancillaries - Laboratory, Pharmacy, and Radiology/Cardiology information systems; PACS; Digital non-DICOM image management
0	All three ancillaries not installed

Tables from HIMSS UK. See Appendices 4a and 4b for full versions.

Vision & Values

"Create a Norfolk and Waveney care system where digital health and care actively supports the best clinical outcomes and experiences for our patients, staff & citizens."

How

To achieve our vision, we will embed our values in everything we do.

Collaborate

Working together with our partners, staff and citizens for the best health outcomes for the region.

Activate

Working with passion to activate digital tools and experience for all.

Innovate

Embracing new ways of thinking and doing.

Priorities

The N&W STP Digital Strategy has five strategic priorities. These strategic priorities are the foundation for the subsequent strategic objectives and workstreams we have set for 2019-2024.

1. To work in a more integrated way as a region.
2. To be able to share information, securely, across the totality of health and care.
3. To ensure staff and citizens have access to the digital tools they need to improve health.
4. To access data for better health and care decisions.
5. To leverage innovative technology and skills.

Strategic Objectives

Our strategy is made up of five strategic objectives which set out the goals of the strategy. Each strategic objective will have a detailed workplan created once the strategy is agreed.

Together

A system approach to digital solutions.

Connect

Digitally connected working.

Activate

Using digital tools for better health outcomes.

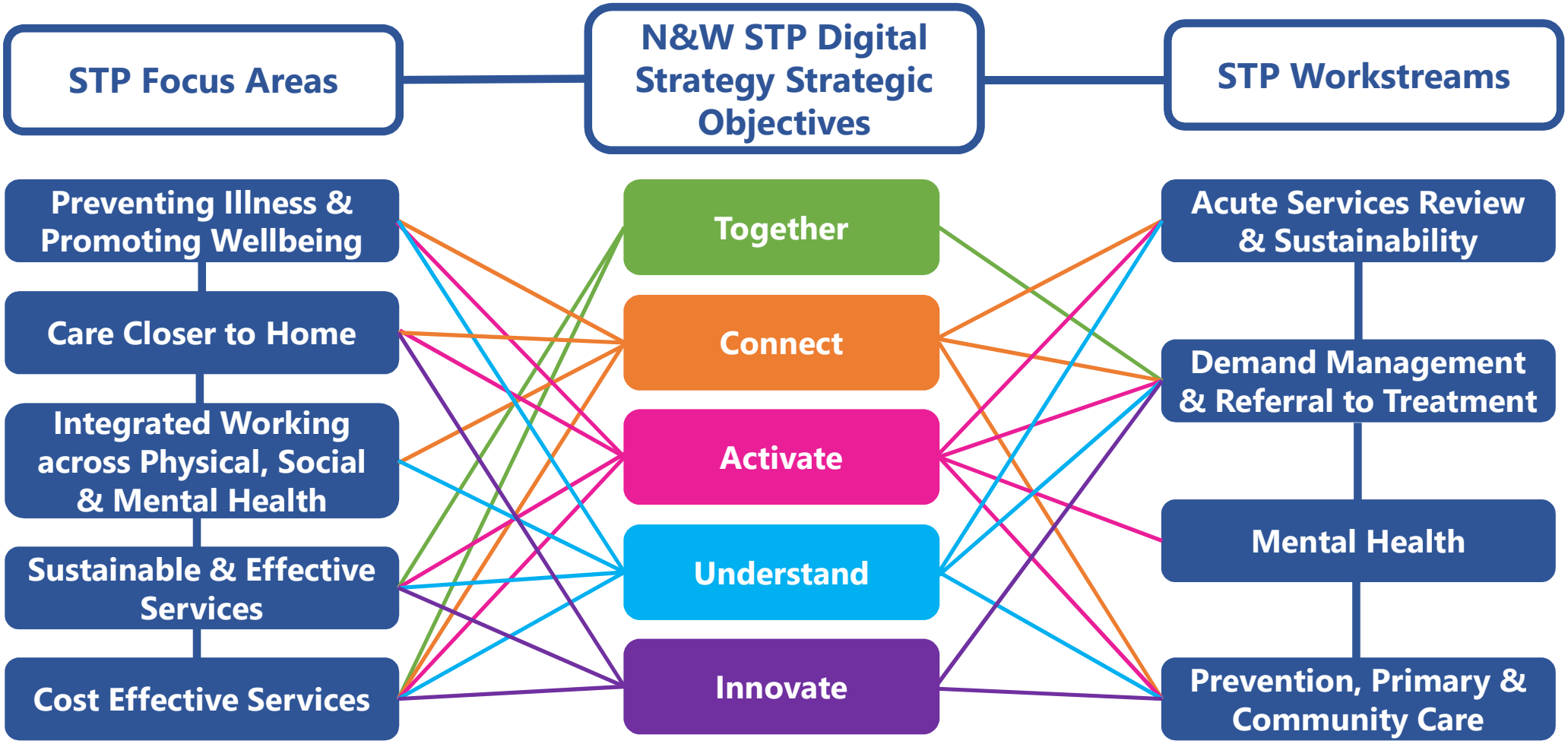
Understand

Leveraging data for better health decisions and outcomes.

Innovate

Leading innovative digital practices in health and care.

Connections



1. Together

Our Focus

To create a shared, regional digital capability that supports the best possible care and sustainability for Norfolk and Waveney. A central resource that creates a single digital voice for our region and its relationships with key partners, national bodies, the voluntary sector and our citizens.

Rationale

Nationally, NHS England are looking to create Integrated Care Systems (ICS) and sees digital health as a core part in an ICS's success. Locally, we are an aspiring ICS and therefore digital has become an increasingly important factor in our ICS journey.

A shared digital capability would not only support better, integrated working, it would provide economies of scale, commercial rationalisation, opportunities to improve capabilities and support quality, regional collaboration.

Current Status

While local IMT teams have good working relationships, we do not maximise our opportunities for economies of scale, shared capability and region wide improvement. Our digital system remains fragmented with ongoing duplication of effort.

FUTURE VISION

A nationally-recognised, efficient, award-winning team as voted by peers and citizens.

Workstreams

- **STP Digital Team**
- **System-wide, leveraged Infrastructure**
- **Commercial Alignment**
- **End User Devices**

2. Connect

Our Focus

To connect our region so that we have one version of the truth about our citizens, the people we look after and the care we provide This includes connecting to all areas that touch on supporting our citizens with their health and care needs

Rationale

Nationally, there is a real drive to connect systems, people and processes, to increase safety and effectiveness, create economies of scale and deliver secure open standards across the health and care system.

Locally, to work as a regional health system, we need to be digitally connected; to share, to collaborate, and to provide our staff, key partners and citizens with the information they need to provide effective care and support in the right location. This includes supporting region wide health and care knowledge management.

Current Status

Owing to the region's digitally immaturity, it remains difficult to work together to share information and create one view of our care needs and pathways. We have large scale duplication, and therefore wasted effort in our attempts to deliver joined up care in our region.

FUTURE VISION

A connected region that is delivering efficient and seamless health and care regardless of provider.

Workstreams

- System Data Repository
- System Interoperability
- Privacy, Security & Governance
- Standardised Clinical Terminology

3. Activate

Our Focus

To utilise digital tools to support, enhance and enable our citizens, patients and staff to engage and create exceptional care and healthier futures.

Rationale

Nationally, digital services, built around the needs of the user (citizen, patient or staff), have become key enablers to healthcare delivery. National focus is on inclusive design and access with control, but not complexity, shared with the user.

Locally, key to success will be consideration and inclusion of all age, socio-economic status, rurality etc. Engagement, conversations and co-production will be key as we build digital culture and develop the digital skills of our citizens, patients and staff.

We will build systems to allow patients active involvement in their care including access to data and guidance on the best management of their care.

Current Status

Proactively engaging with our citizens, patients and staff in relation to digital is a key area for development. Historically, we have decided and implemented digital technology in isolation and not leveraged its full potential. Engagement, empowerment and education will be key.

FUTURE VISION

Access to secure and timely information, when needed, to support and empower for the best clinical and social outcomes.

Workstreams

- **Clinical Applications**
- **Acute EPR**
- **Non-Clinical Applications**
- **Citizen / Patient Digital Tools**

4. Understand

Our Focus

To create exceptional, secure and accessible data so our region can effectively, plan, prevent and take action to positively influence the health and care of our citizens.

Rationale

Nationally, data has become an increasingly vital part of healthcare delivery. It supports the insight that lead to better decisions and therefore better outcomes. Driven by new, national data standards, the aim is to simplify the ability to connect and aggregate.

Locally, our dependence on paper has hindered our ability to access data to maximum effect. It is vital to our care provision and sustainability that we create regional, accurate, timely data when and where people need it.

Current Status

No aggregated data, real time or even timely data. Initial pilot projects in place to create regional views of data

FUTURE VISION

Access to secure and timely information, when needed, to support the best clinical and social outcomes.

Workstreams

- **Clinical Decision Support & Reduction of Clinical Variation**
- **Research**
- **Business Intelligence**
- **Population Health**
- **STP Data Architecture**

5. Innovate

Our Focus

To create the space and capability to build modern, timely approaches to digital services. Continually improving health as partnerships

Rationale

Nationally the NHS recognises that it needs to do more to leverage the health tech industry and innovation that exists in the UK. The NHS recognises it has fared poorly at true innovation. This includes areas such as artificial intelligence, machine learning and robotics.

Locally, we have access to a number of brilliant partners such as the Norwich Research Park and University of East Anglia. Part of the future will be to build more formal partnerships with these organisations to enable our own innovative practices and team.

Current Status

We currently have no capacity or capability to give modern or innovative technologies the focus required. Pockets of innovative thinking is taking place but translation to reality remains minimal.

FUTURE VISION
Award winning digital services and though leading innovation team.

Workstreams

- **Innovation Team and Partnerships**
- **Digital Transformation**
- **Machine Learning, Robotics and Artificial Intelligence**

Priority Partner Projects for 2019

Joint Acute EPR and Acute Services Integration.

Primary Care Integration.

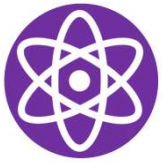
GP Connect/ GP Online.

Norfolk and Waveney Integrated Care Record and LHCRE.

STP Digital Team.

STP Workstream Delivery Support.

Enablers



People/ Resource – System Wide Team

Investment – Capital and Revenue Funding

Digital Maturity Baseline Assessment & Improvement Plan

Shared Infrastructure

Dedicated Time for Digital Health on Everyone's Agenda

Strong Governance

Appendices

Appendix 1	N&W STP Partners
Appendix 2	National Digital Context Detail
Appendix 3	Strategic Objectives and Work stream Mapping
Appendix 4	Work stream Actions
Appendix 5	Work stream Outcomes

Appendix 1 – N&W STP Partners

Clinical Commissioning Groups	**North Norfolk CCG** **West Norfolk CCG** **Norwich CCG** **South Norfolk CCG** **Great Yarmouth & Waveney CCG**
NHS Providers	**Norfolk & Norwich University Hospitals NHS Foundation Trust** **The Queen Elizabeth Hospital NHS Foundation Trust** **James Paget University Hospitals NHS Foundation Trust** **Norfolk Community Health and Care NHS Trust** **Norfolk & Suffolk NHS Foundation Trust** **East of England Ambulance Services**
Key Partners	**The 5 STP GP Provider Organisations** **GP Practices** **Norfolk Independent Care** **Integrated Care 24 NHS** **East Coast Community Healthcare CIC** **Norfolk County Council** **Suffolk County Council** **Arden and Gem CSU** **Voluntary and Third Sector** **Academic Health Science Networks**

Appendix 2 – National Digital Context Detail

The NHS Long Term Plan (January, 2019) states that, for digital;

- Practical priorities will drive NHS digital transformation.
- Create straightforward digital access to NHS services, and help patients and their carers manage their health.
- Ensure that clinicians can access and interact with patient records and care plans wherever they are.
- Use decision support and artificial intelligence (AI) to help clinicians in applying best practice, eliminate unwarranted variation across the whole pathway of care, and support patients in managing their health and condition.
- Use predictive techniques to support local health systems to plan care for populations.
- Use intuitive tools to capture data as a by-product of care in ways that empower clinicians and reduce the administrative burden.
- Protect patients' privacy and give them control over their medical record.
- Link clinical, genomic and other data to support the development of new treatments to improve the NHS, making data captured for care available for clinical research, and publish, as open data, aggregate metrics about NHS performance and services.
- Ensure NHS systems and NHS data are secure through implementation of security, monitoring systems and staff education.
- Mandate and rigorously enforce technology standards (as described in The Future of Healthcare) to ensure data is interoperable and accessible.
- Encourage a world leading health IT industry in England with a supportive environment for software developers and innovators.

Appendix 3 – Strategic Objectives & Workstream Mapping

Strategic Objective	Workstreams
Together	• STP Digital Team • Regional Leveraged Infrastructure • Commercial Alignment • End User Devices
Connect	• Regional System Data Repository • System Interoperability • Privacy, Security & Governance
Activate	• Clinical Applications • Acute EPR • Non-Clinical Applications • Citizen/Patient Digital Tools
Understand	• Clinical Decision Support & Reduction in Clinical Variation • Research • Business Intelligence • Population Health Analytics
Innovate	• Innovation Team • Digital Transformation • Machine Learning, Robotics & Artificial Intelligence

Appendix 4 -Workstream Actions

1. Together

1.1 - STP Digital Team

1. Create STP Digital team to action strategy
2. Put single digital function into action
3. Develop team to exploit external funding opportunities

1.2 - System-wide, Leveraged Infrastructure

1. Develop a Warranted Environment Specification
2. Set out STP infrastructure strategy
3. Move to shared data and network infrastructure

1.3 - Commercial Alignment

1. Baseline current contract and supplier
2. Develop Commercial, legal and ITSLM capability
3. Harmonise similar contracts and procure collectively

1.4 - End User Devices

1. Mobility and ease of use
2. Standardise devices for value and supportability
3. Voice interaction

2. Connect

2.1 - Regional System Data Repository

1. Develop data strategy
2. Hybrid data lake
3. Exploit public cloud

2.2 - System Interoperability

1. Open APIs
2. Systems redeveloped, procured to ensure interoperability
3. Meet national guidelines on Transfers of Care

2.3 - Privacy, Security & Governance

1. Establish an STP IG/data security function and strategy
2. Compliance to NIS Directive and other required legislation
3. Encrypted networks and data systems designed for security

2.4 - Standardised Clinical Terminolgy

1. Baseline assessment of current adherence to guidelines
2. Set standard of SNOMED CT

3. Activate

3.1 - Clinical Applications

1. Deliver consolidated EPR system, enhance primary and social care systems.
2. Move towards mobile app and/or interoperable clinical applications
3. Harmonise clinical applications across the system

3.2 - Non- Clinical Applications

1. Consolidate back-office and productivity tools
2. Further develop and support business intelligence platforms including self-service and insights
3. Consolidate risk-stratification toolsets

3.3 - Citizen/ Patient Digital Tools

1. Continue to develop Norfolk and Waveney Clinical Record
2. Develop a citizen portal, built to integrate with regional and national portals
3. Assistive technology – telecare, telemonitoring, telehealth

4. Understand

4.1 - Clinical Decision Support & Reduction of Clinical Variation

1. Support Acute Services Integration
2. Standardise clinical pathway tools
3. Evidence-based machine learning and clinical decision support tools integrated with clinical applications

4.2 - Research

1. Active role in the Academic Health Science Network
2. Data systems and architecture that is 'research ready'
3. Forge strong working relationships with academic partners such as UEA and private health science partners.

4.3 – Business Intelligence and Population Health Analytics

1. Develop a data sciences function
2. System-wide dashboards and insights – predictive and advanced analytics
3. Aggregated data at population-level
4. System Risk Stratification and Segmentation

4.4 – System Data Lake

1. Develop data strategy and standards
2. Vendor agnostic data exchange
3. Seamless integration with organisational systems to provide a joined-up data experience

5. Innovate

5.1 - Innovation Team

1. Create a Norfolk Care Innovation Hub
2. Leverage talent through an Innovation Community and existing groups for PPP, Hack-days, Education links
3. Second operational, commissioning and clinical staff to work in partnership with technology and informatics.

5.2 - Digital Transformation

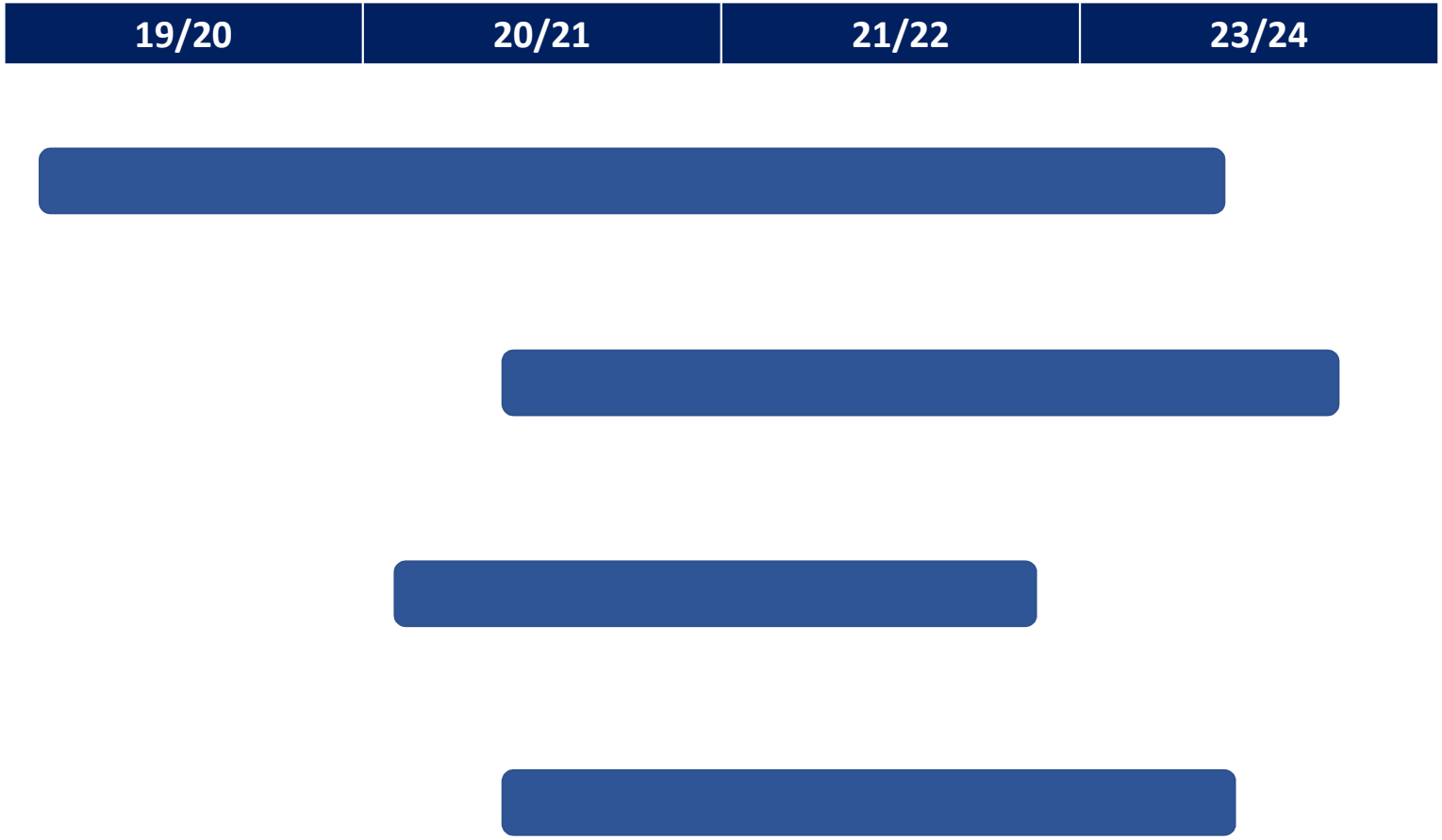
1. Prescribing and supporting care apps including the NHS App
2. Erode separation from traditional contracts, technology, performance, clinical practice, QIPP, PMO.
3. Digital first policy

5.3 - Machine Learning, Robotics and Artificial Intelligence

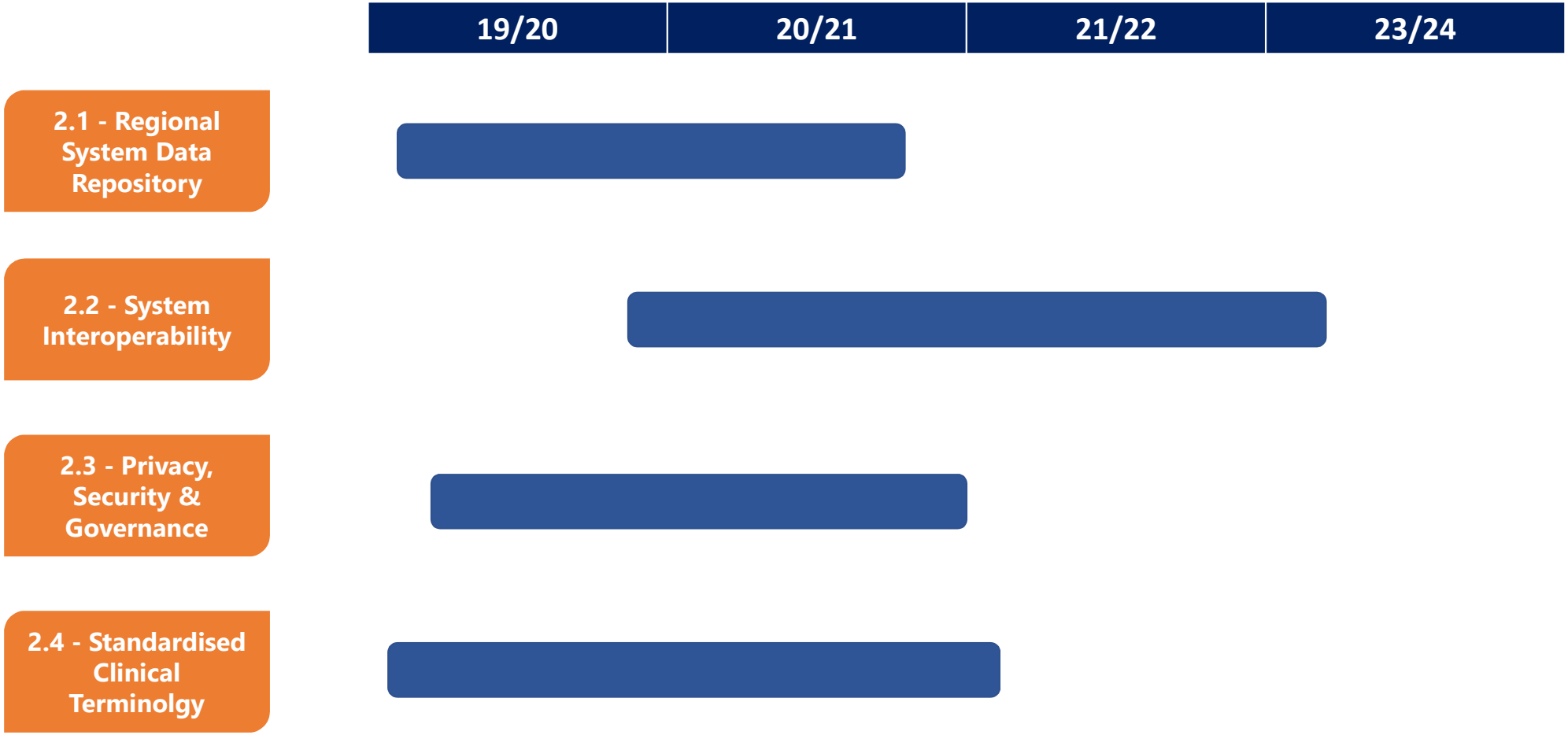
1. Begin journey with Clinical Decision Support
2. Expand use of robotics for clinical practice and expand into administration functions
3. Set out AI strategy in 2019.

Appendix 5 – Workstream Timelines

1. Together


19/20
20/21
21/22
23/24
1.1 - STP Digital Team
1.2 - System-wide, Leveraged Infrastructure
1.3 - Commercial Alignment
1.4 - End User Devices

2. Connect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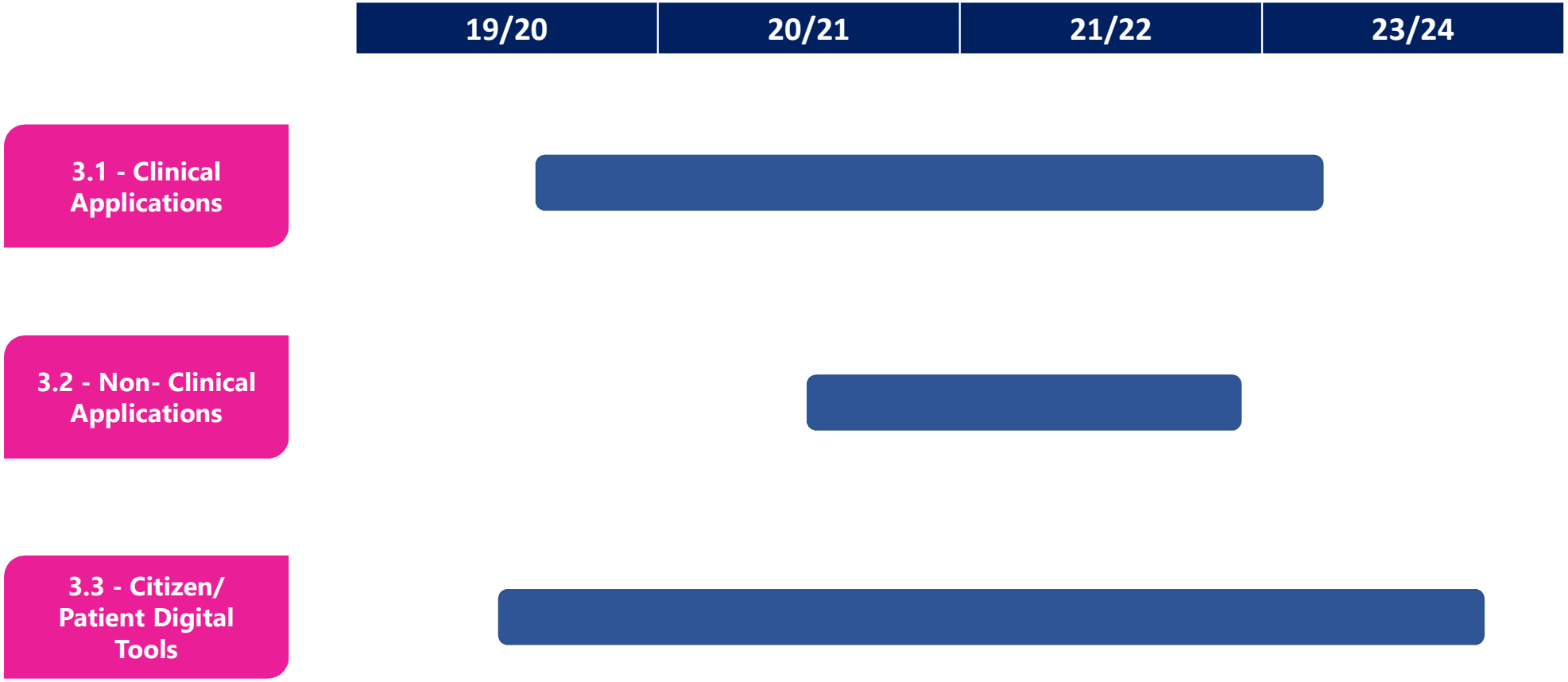
2.4 - Standardised Clinical Terminolgy

3. Activate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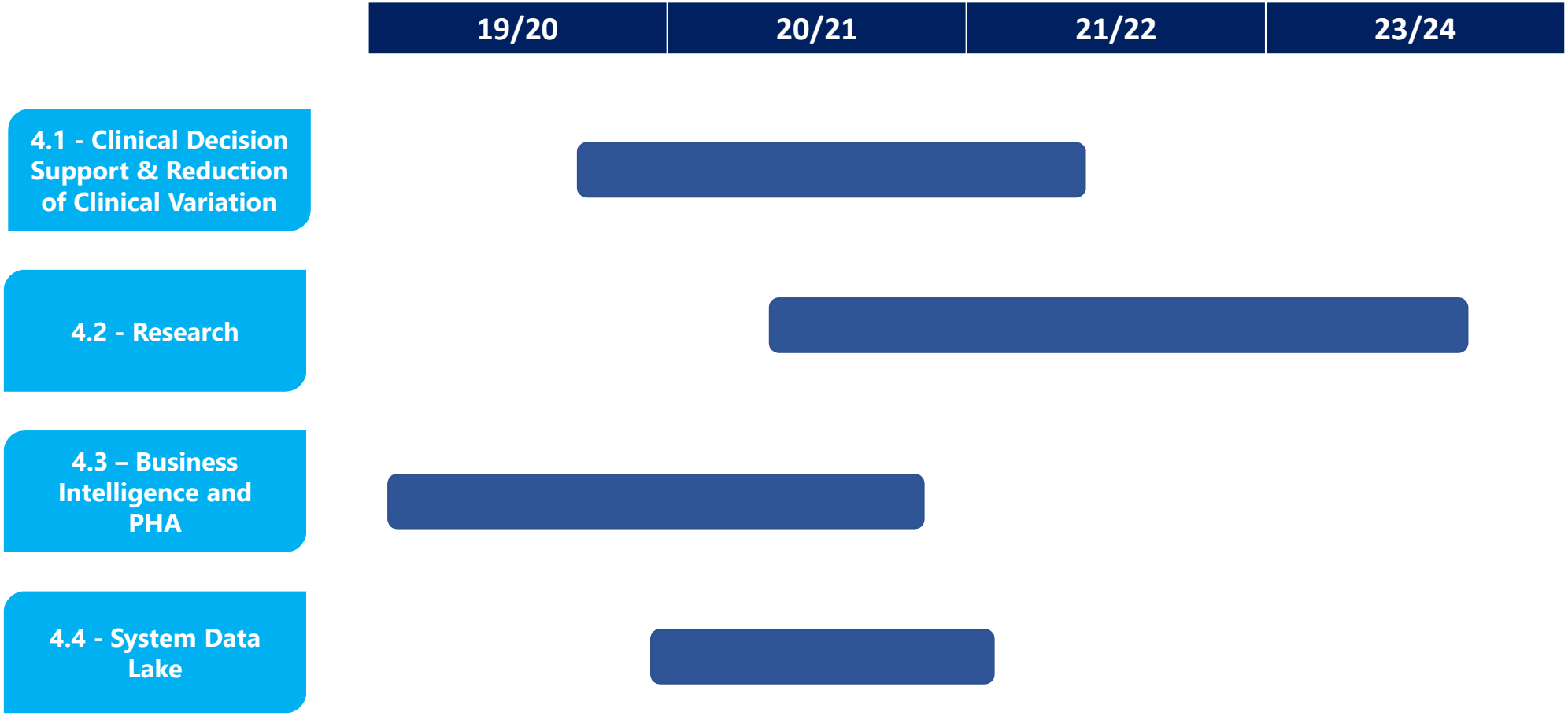
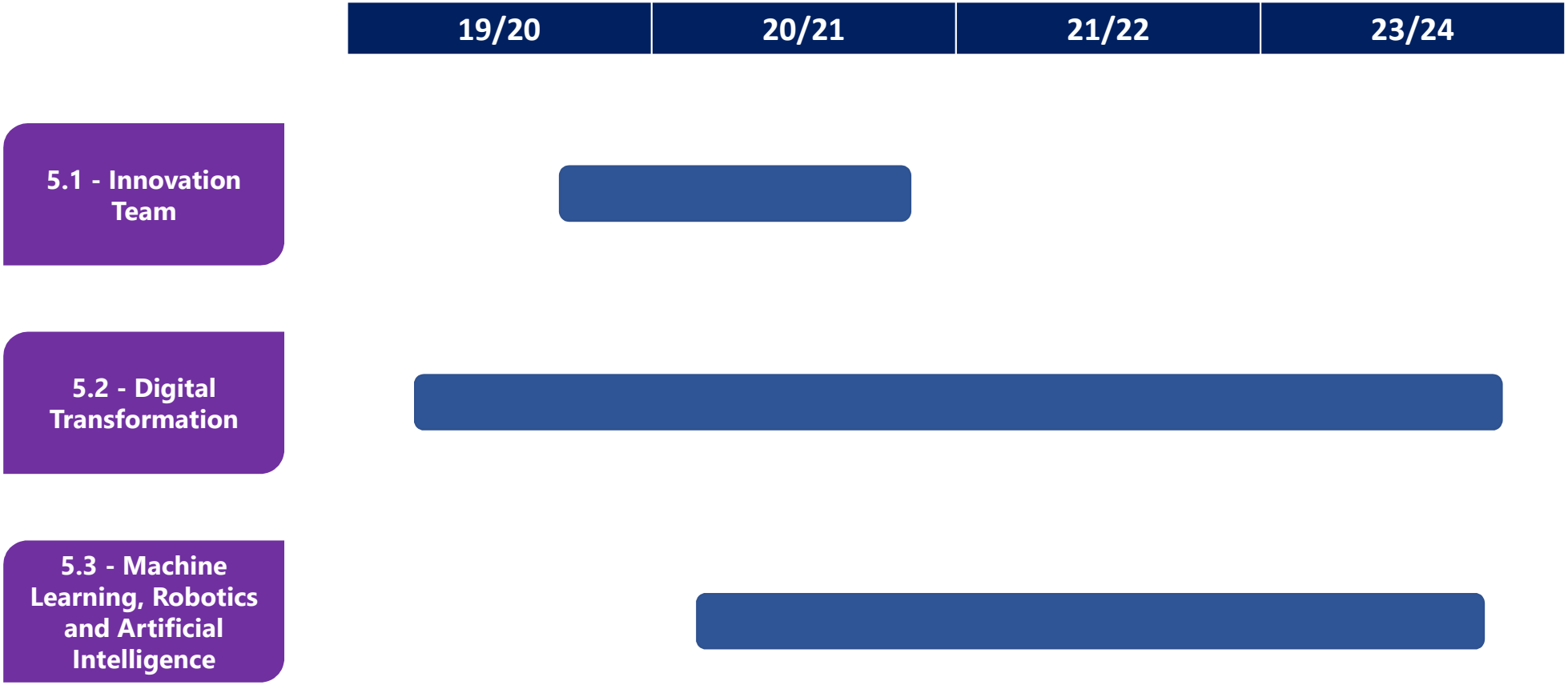
4. Understand



5. Innovate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5.3 - Machine Learning, Robotics and Artificial Intelligence