Skunkworks @ NHSx

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NHSX

- A new joint team focussed on accelerating the digitisation of health and care

- Bringing together expertise and talent from multiple ALBs

- Providing consistent and coherent digital policy

- Leading the development of strategy, programme and project delivery

Our mission

- To make sure citizens and staff have the digital technology they need

- Speed up the delivery and adoption of new tech

- Help people stay well and manage their health and care needs

- Give health and care staff the tech they need to do their jobs

- Focus forensically on user needs

- Create an environment that supports and encourages innovation

Our priorities

- **Setting standards** to ensure that all new NHS technology are interoperable

- **Publishing APIs** for key national services

- Developing a **structured and consistent approach** for market entry (SMEs and Big Tech)

- **Partnering with industry** to leverage their capabilities

- Developing and implementing **a new transformation model**

- **Enabling health and care staff** to access patient records securely and reliably across the system

- Recruiting a **world-class technical team** to crack some of the toughest problems in NHS and social care technology

What do we do?

We are a technology seed lab, supporting NHSx and the wider health and care system; exploring ideas, piloting them, and creating technical resources so the work can be taken forward.

The health and care system is big and complex with huge variance of technical capability and digital maturity amongst both service providers and service users.

Adoption of new technologies and national services has been slow, with much focus on removing barriers to using existing services.

We look for ways to address challenging problems that have wide application at scale using disruptive technologies, to seed the next generation of digital transformation.

Driving healthtech innovation

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We work with people who have a need, a mandate to serve it, but no good way to do so.
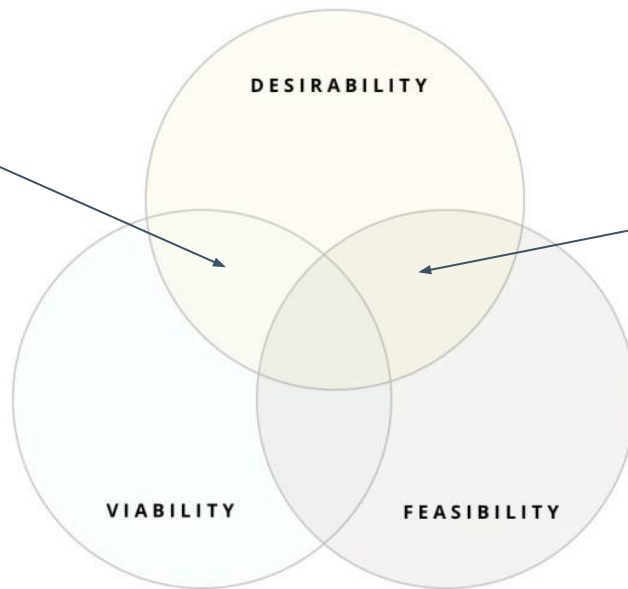
We are here to explore what is possible, and help people consider different ways to achieve their aims.

DESIRABILITY

VIABILITY

FEASIBILITY

We consider how new technologies might be applied to 'obvious' problems e.g. could we eliminate typing, and generate reliable, clinically coded patient data? How could we use voice, and NFC?

Tomorrow's opportunities, today

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It provides separation from our near-term pressures to encourage…

Creativity

Experimentation

Rapid-prototyping

Disruptive Technology

Digital Talent

Differentiation

Innovation Culture

Co-creation

…to rapidly deliver the promising opportunities for tomorrow
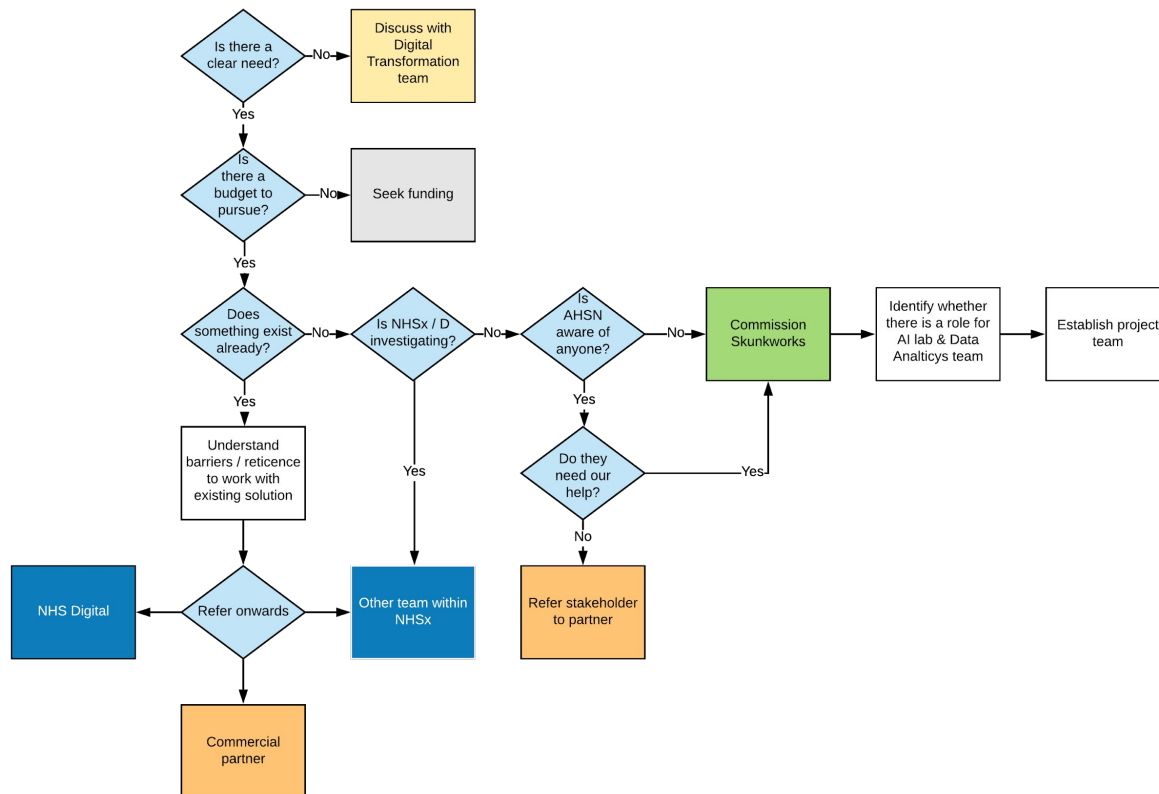
Our ethos

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- Start with "Why?", and keep questioning

- Believe everything is possible

- We don't know everything - but we want to

- Show, don't tell

- Share, and work transparently

- Do work that works

How far do we take our work?

We focus on the early stages of innovation, to prove out whether a concept is worth committing to.
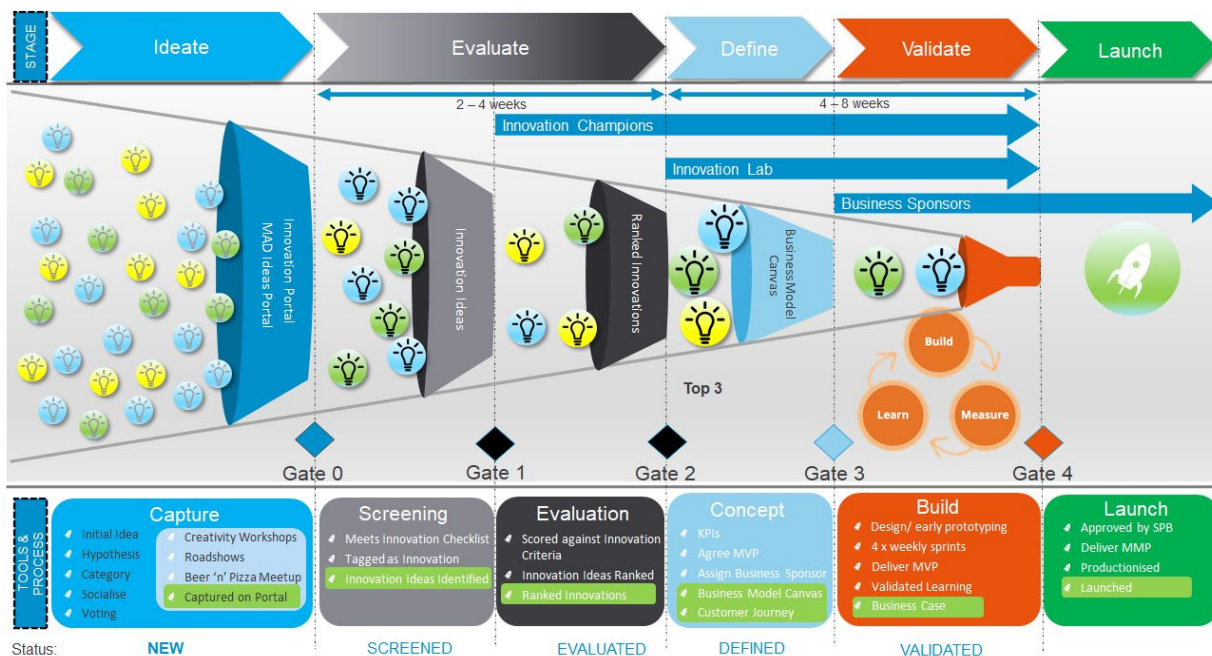
When is it a Skunkworks project?

How do we prioritise our work?

1. Does it support one of our Missions?

    a. Reduce the burden on our workforce, so they can focus on delivering care;

    b. Give people the tools to access information and services directly, so they can best take charge of their own health and care;

    c. Ensure information about people's health and care can be safely accessed, wherever it is needed;

    d. Aid the improvement of safety across health and care systems; and

    e. Improve health and care productivity with digital technology.

2. Will it unblock progress elsewhere?

3. Is it a problem no one else is looking at?

4. Can we articulate the value of solving the problem?

5. Is there a partner to work with if we prove the concept?

Our objectives

- **Objective: Demonstrate measurable results in support of our missions & to drive the strategic agenda**
    - KR1: Test 4 new technology ideas in situ (i.e. in a real-world healthcare setting)
    - KR2: At least 1 to be taken forward to extended pilot
    - KR3: Show the benefit. Provide metrics from pilot(s) to support a business case to pursue further

- **Objective: Deliver value to the health and care developer ecosystem**
    - KR1: Conduct at least 2 Skunkworks-led hacks
    - KR2: Provide an opportunity to a new commercial partner (not currently contracted to work with NHS / social care)
    - KR3: Open source our code for further development by the community

- **Objective: Build an effective 'tiger team'**
    - KR1: Recruit 7 key roles (3 from pool) with skills needed to get stuff done: Head of *Skunkworks*, Lead Engineer, Principal Developer, Senior UX Designer; and from pool, Senior User Researcher, BA, Senior Delivery Manager
    - KR2: Agree options for 'ways of working' - patterns to apply to projects as suit, and the tools we use

Our approach

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- Aligned to GDS principles and the <u>Service Standard</u>

- Lean and Agile

- Core team supplemented by experts / specialists

- Rapid design sprints to:
  - Understand the problem space & users
  - Create prototypes using hypothesis driven design
  - Test with users to inform next steps

- Agile development cycle to create and test MVP / PoC

- Once concept is proven, handover assets and code:
  - Adhering to standards and best practice where possible/applicable
  - Open source and well documented
  - With reference implementation & sandpit

Team
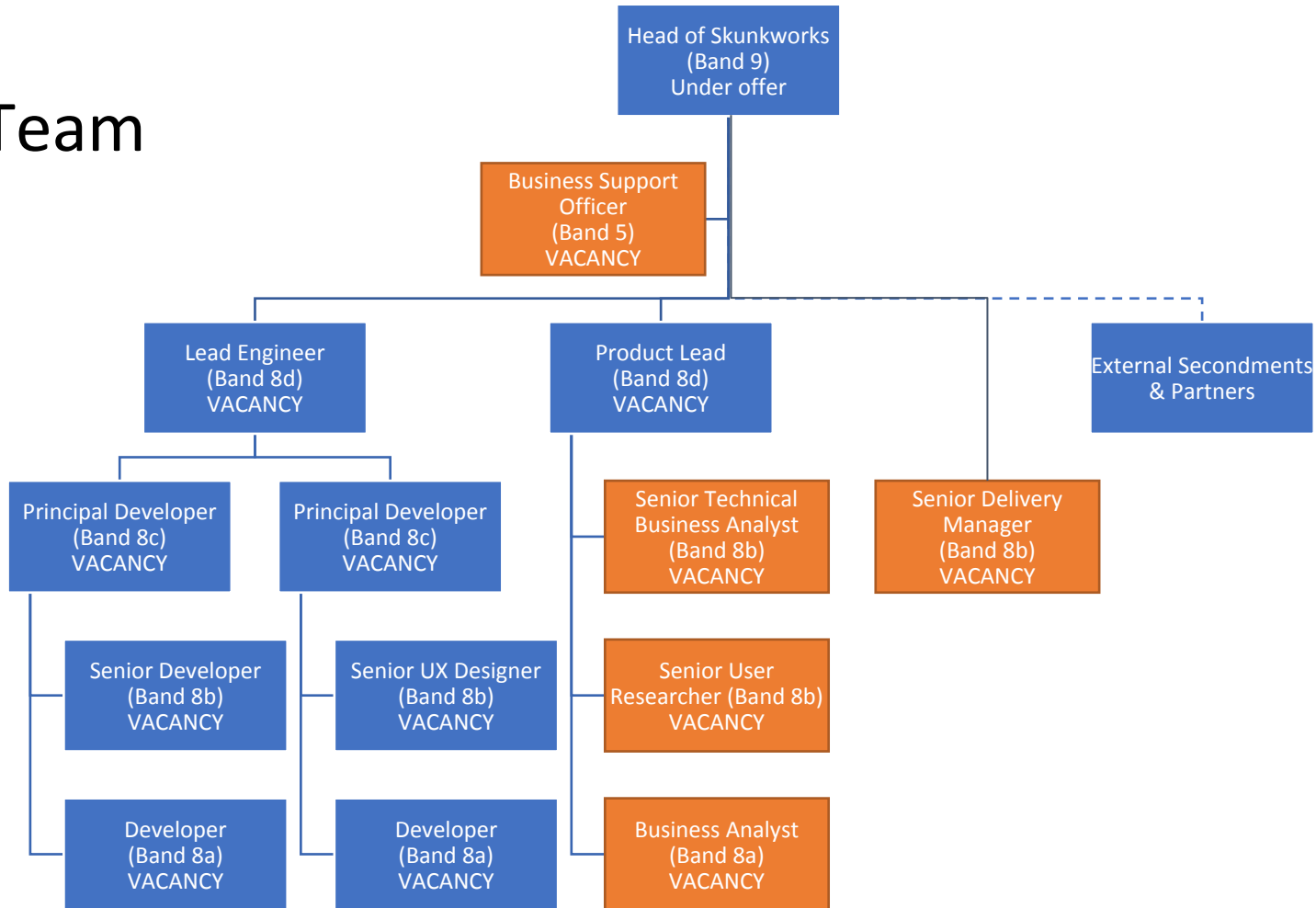
Who do we work with?

We anticipate most of our work to come from NHSx teams, other NHS and health and social care organisations and AHSNs; to serve the needs of professionals, patients and the public.

We will <u>partner</u> with:

- Tech communities (e.g. InterOpen, TechNation, TechNorth, Northcoders)
- Universities
- Innovative tech organisations
- SMEs and new entrants to healthcare marketplace

To bring together the best health and technology expertise to drive innovation for the NHS & social care

What's a partner ?

"I want institutional credibility to support my ambition to build a business, convince VC investors and lead to an IPO"

"I want another route to market my company's products and services"

"I want access to bright sparky SMEs to demonstrate we are at the cutting edge of technology and doing cool things "

"I want access to enough data without going through all the hoops to write papers and develop my academic career"

Ethical partnering - enough honesty, trust, shared common purpose and aligned values to make it worthwhile for all concerned. Don't expect 100% alignment, but it better be more than 50%.

Our activities & tools

Community engagement

It takes time to build a community, and to be sustained, it needs to provide real benefit to all involved. Too many organisations talk about building a community as a way to benefit the organisation without considering what to 'give back'.

Initially, we will:

- Attend events and hacks arranged by existing communities
- Speak at events, publicising the issues and problems we want to address, as well as some of the concepts we have explored
- Accelerate ideas people bring to us, organising jams / hacks / pilots to help prove the concept
- Blog about what we do and engage in discussion with the ecosystem about needs, barriers, and their ideas for change

Ideas bank

Lots of people have lots of good ideas they don't have time / funds / scope to explore. We would like to capture some of these, initially from internal stakeholders but over time we can widen the scope.

This will give us:

- A set of ideas to be used in jams/hacks as starter material (combine these things to make… format)
- A bank of things to assess when we are asking 'how might we'
- A way to socialise what people are thinking about for others to build upon or collaborate
- A bank of ideas we can offer to others (if they are not for us)

Developing talent in an inclusive team

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- Providing opportunities for people not working in the NHS to work on 'real' problems for their portfolios, through hacks and events - and commit to providing references where appropriate

- Shadowing / internships / short term secondments for internal NHSx staff

- A real commitment to L&D - team capacity model based around a proportion of time available to study / read / explore new concepts

- Ensure equality of opportunity - for example when approached with speaking opportunities, offer to wider team (where appropriate)

- Seek to amplify underrepresented voices, and commit to coaching and removing barriers to opportunity

Any questions?

Just because..

"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."

Further Reading...