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# “Where Do I Start?”: How Governments Can Prioritise AI Solutions for Health

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Ministers know they are running out of time and money. A fly on the wall in every minister of health’s office will tell you the same story: an inbox full of complaints, stories about backlogs, budget warnings from the finance ministry and messages from the prime minister’s office asking for “quick wins”.

The problem is that there are very few quick wins in health today. Health systems are understaffed, demand is rising and budgets are failing to keep pace. More than 4 billion people around the world still lack access to essential services. Health systems are expected to do more with less – and to do it now.

## AI in Health: Promise and Pressure

Everyone is saying that artificial intelligence could be the answer, but no one knows where to start and there is significant risk in getting it wrong. What ministers need isn’t another sales pitch from a startup, but a way to cut through the noise and to identify where AI can actually help. To do that they must work out what to prioritise politically and how to turn potential into results.

This paper introduces a practical framework that can help governments decide where AI is most usefully applied and outlines the enablers required to implement it at scale.

## AI Is Coming Whether Governments Are Prepared or Not

Governments are already deploying AI for disease surveillance, health systems are using it to identify which patients are most in need of treatment and individuals increasingly rely on AI-enabled applications for self-care. Governments that adopt AI strategically can leapfrog legacy infrastructure

and accelerate progress towards more integrated, responsive and data-driven care. But many of the most transformative applications – such as decision support for clinicians, image analysis and population-health analytics – require purposeful government investment and stewardship to realise their full public value.

However, leaders face real difficulty in deciding what to prioritise. In some contexts, discussions focus narrowly on high-profile use cases such as medical imaging; this constrains decision-making to only a fraction of AI’s potential for strengthening health systems. In other contexts, the proliferation of competing AI products can create confusion about which problems to solve first.

The Tony Blair Institute for Global Change has worked on health projects with governments in 26 countries across five continents. As part of this advisory work we are often asked how best to use AI for health-care delivery – and the most frequent question we hear is, “Where do I start?” Leaders are eager to harness AI on their own terms and ensure focus on their country’s specific issues, rather than having their priorities dictated by technology vendors.

To decide where to focus, leaders need a clear, practical approach that classifies AI applications in a structured manner, supporting governments in strategically addressing their systemic health issues. Existing approaches to classifying AI in health are often too academic and disconnected from political realities to be useful for ministerial decision-making.

## TBI’s AI in Health Framework

To address leaders’ need to prioritise AI solutions, we have worked with governments to develop an approach that provides a comprehensive classification of AI applications within the health sector. Our AI in Health Framework bridges the gap between academic classification and practical application, offering governments a structured taxonomy that can be

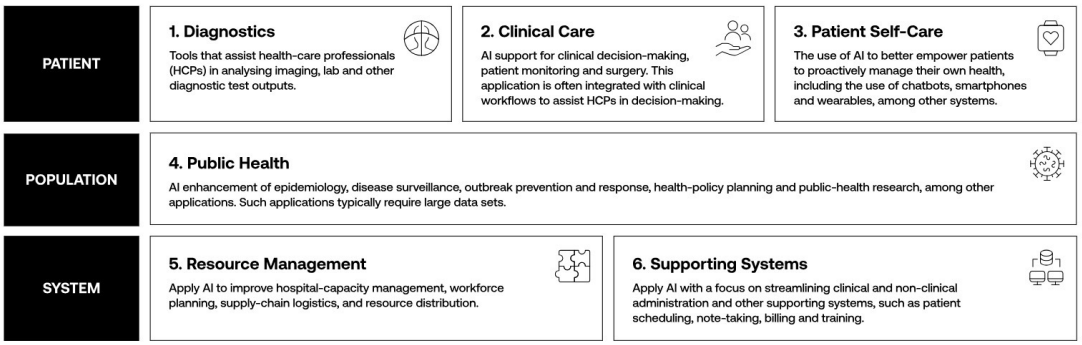
directly applied to policy, planning and delivery. It has been developed based on analysis of leading use cases for AI in health and is organised into six overarching domains.

1. **Diagnostics:** AI assisting health professionals with imaging, lab tests and other diagnostic processes.
2. **Clinical care:** AI supporting treatment and augmenting clinical decision-making to improve care.
3. **Patient self-care:** AI empowering patients in the management of their own health, including wearables, mobile apps and chatbots.
4. **Public health:** AI enhancing disease surveillance, outbreak prevention and response, policy planning and other applications.
5. **Resource management:** AI strengthening health-facility capacity, workforce planning and the management of supply chains and budgets.
6. **Supporting systems:** AI streamlining administrative and non-clinical tasks such as scheduling, billing and people management.

Each domain is further broken down into sub-categories – 23 in total – and we expect the tool to evolve and mature over time as new innovations in AI disrupt how health care is delivered and democratised.

FIGURE 1

# TBI’s AI in Health Framework




## Themes

### 1. 1. DIAGNOSTICS

Tools that assist health-care professionals (HCPs) in analysing imaging, lab and other diagnostic test outputs.

### 1.1 MEDICAL IMAGING

Assistance in the interpretation of X-rays, MRIs, CT scans and other imaging outputs when providing patient diagnoses.

**Example use cases:**

- AI-powered analysis of X-ray images to detect tuberculosis and other lung abnormalities
- AI analysis of CT scans to help detect cancer

### 1.2 LAB DIAGNOSTICS

Analysis of lab samples to guide diagnosis.

**Example use cases:**

- Automated, AI-based microscopes that can detect malaria parasites
- AI analysis of pathology samples to aid diagnosis of cancer and other conditions
- Genetic characterisation of tumours to guide prognosis and treatment

### 1.3 POINT-OF-CARE DIAGNOSTICS

Interpretation of data from point-of-care diagnostics such as an ECG, ultrasound or smartphone-generated images.

**Example use cases:**

- AI-based skin-cancer detection based on smartphone images
- AI assessment of ECG outputs to allow community health workers to assess patients outside of hospitals
- AI analysis of digital images of the cervix taken using a standard colposcope

## 2. 2. CLINICAL CARE

AI support for clinical decision-making, patient monitoring and surgery. This application is often integrated with clinical workflows to assist HCPs in decision-making.

### 2.1 CLINICAL DECISION SUPPORT

Analysis of available data to provide evidence-based recommendations to HCPs.

**Example use cases:**

- Chatbots to assist community health workers in faster and more efficient treatment planning

- Triage decision support to help reduce waiting lists for appointments
- AI-guided medication-dosing recommendations

### 2.2 INPATIENT MONITORING

AI-powered monitoring systems to track patients' conditions over time while in hospital.

**Example use cases:**

- Predict when patients will be ready for discharge
- Early warning of infection or patient deterioration in intensive or critical care settings

### 2.3 REMOTE PATIENT MONITORING

AI-driven monitoring systems designed to deliver predictive insights and continuous patient support remotely, reducing the need for in-person clinic visits.

**Example use cases:**

- Medication-adherence monitoring with personalised prompts for patients
- AI nurses call patients post-discharge to monitor recovery

### 2.4 SURGERY

Real-time support of surgical procedures through AI insights, assistance and guided robotic surgery.

**Example use case:**

- Real-time insights about surgical best practices based on a patient's condition, obtained by feeding data from medical devices in the operating room to an AI interpreter

### 3. 3. PATIENT SELF-CARE

The use of AI to better empower patients to proactively manage their own health, including the use of chatbots, smartphones and wearables, among other systems.

#### 3.1 CARE RECOMMENDATIONS

Answer personalised questions and suggest options for treatment of minor health concerns.

**Example use cases:**

- AI chatbots that provide recommendations for common complaints (such as colds and headaches)
- Symptom-checking apps or programs

#### 3.2 AT-HOME CARE MANAGEMENT

Real-time support for patients managing long-term conditions or post-discharge care.

**Example use cases:**

- Diabetes-management system that analyses glucose levels and offers personalised advice
- Personalised education to assist patients in understanding their health and/or specific conditions

#### 3.3 TREATMENT

Treatment provided by an AI practitioner. (Note: This is an emerging tool, as current regulation and policy prevent AI from being the sole provider of care in most settings.)

**Example use case:**

- Mental-health chatbot for clinically validated therapy support

### 3.4 WELLNESS

Personalised coaching for sleep, weight loss and disease prevention; often based on data from wearable devices.

**Example use cases:**

- Sleep-monitoring apps that provide insights about sleep duration and quality
- Personalised meal plans that meet nutrient needs and dietary restrictions

### 4. 4. PUBLIC HEALTH

AI enhancement of epidemiology, disease surveillance, outbreak prediction, health-policy planning and public-health research, among other applications. Such applications typically require large data sets.

### 4.1 SURVEILLANCE AND OUTBREAK PREVENTION

AI-augmented surveillance of diseases, to monitor spread and signal if or when a public health response is needed to prevent outbreaks or epidemics.

**Example use cases:**

- Aggregate and interpret genomic surveillance data from patients and pathogens, to track diseases and variants
- Scrape media and/or search engines to identify geographical areas where patients are searching common terms related to illness

### 4.2 POPULATION HEALTH

Population risk stratification to identify high-risk groups for preventative care or interventions.

**Example use cases:**

- AI-powered risk estimation for diseases (such as type 2 diabetes mellitus) or hospitalisation; enables proactive intervention
- Analysis of health-care data to recommend improvements for regional/ demographic-based interventions

### 4.3 HEALTH POLICY

Use of AI to map policy and the sociodemographic landscape of a country/ region to determine where policy actions could improve public health.

**Example use case:**

- Analysis of national census results regarding geographic, biological and social determinants of health information, to identify disparities in access to care and suggest potential interventions

### 5. 5. RESOURCE MANAGEMENT

Apply AI to improve hospital-capacity management, workforce planning, supply-chain logistics and resource distribution.

### 5.1 INFRASTRUCTURE CAPACITY MANAGEMENT

Optimise the allocation of beds, machines and other infrastructural resources.

**Example use cases:**

- Employ AI to dynamically allocate imaging resources (such as scanners) to patients with the highest need
- Use AI to optimise bed management, forecast demand and indicate potential bottlenecks

### 5.2 FINANCIAL TRACKING AND ALLOCATION

Track expenses and suggest where financial resources should be allocated based on forecast demand.

**Example use cases:**

- Analyse budgeted vs actual spending to provide suggestions for funding allocation
- Carry out demand analysis to predict monthly financial outlay (on the likes of consumables and staff) and identify options for more efficient resource use

### 5.3 HUMAN RESOURCE ALLOCATION

Map workforce gaps to ensure that medical personnel are deployed efficiently.

**Example use cases:**

- Allocate regional or national frontline care workers (such as nurses, doctors and community health workers) based on predicted capacity needs
- Schedule clinical and back-office staff shifts based on demand within a given health-care facility

### 5.4 SUPPLY-CHAIN MANAGEMENT

Order, track and manage distribution of consumables.

**Example use cases:**

- Forecast demand for resources and identify opportunities for bulk ordering
- Track and trace shipments to assure quality and safety, flag abnormalities, and prevent stockouts

### 6. 6. SUPPORTING SYSTEMS

Apply AI with a focus on streamlining clinical and non-clinical administration and other supporting systems, such as patient scheduling, note-taking, billing and training.

### 6.1 DOCUMENTATION AND COMMUNICATION

AI prompts, clinical note taking and/or transcription during clinical discussions.

**Example use cases:**

- AI speech-to-text documentation
- Use of AI to generate health reports for patients, based on content from an electronic health record (EHR)
- Tailored communications for patients and clinicians

### 6.2 PATIENT BOOKING AND FLOW MANAGEMENT

Automation of patient booking and registration.

**Example use cases:**

- Match patient preferences with provider availability to schedule appointments
- AI-guided patient registration at intake, freeing up time for triage staff

### 6.3 BILLING AND CLAIMS PROCESSING

Automation of revenue-cycle-management processes including billing, appeals and documentation.

**Example use cases:**

- AI automation of documentation collection and finalisation for billing

- Assess likelihood of claim denial, with recommendations on improving reimbursements

### 6.4 DATA PROCESSING

Aggregation, cleaning and management of disparate data sets to improve integration between data sources.

**Example use cases:**

- Automation of data exchange between EHR systems
- Context-aware translation of data into different languages

### 6.5 EDUCATION AND TRAINING

Use of AI to train clinical and non-clinical staff in new techniques, systems or other learning objectives.

**Example use cases:**

- Enhance clinical training through simulations and performance insights
- Chatbots to train health-care providers on new systems and support troubleshooting

CASE STUDY

## Rwanda: Turning Ambition Into Action

Rwanda has made major strides in health outcomes over the past two decades, but like any rapidly evolving system it faces the structural pressures that come with growth. These include the persistent fragmentation of digital systems, workforce shortages, a rising burden of non-communicable diseases (NCDs), donor dependence and limited real-time use of data for decision-making. The result is long waits for patients, bottlenecks in hospital processes, fragmented medical records and uneven access to specialised care, especially for rural populations.

The government has placed health at the centre of its national development agenda, prioritising it within Vision 2050 and the Health Sector Strategic Plan V 2024–2029 (HSSP V). AI has been identified as a strategic lever to tackle specialist shortages, strengthen information systems, provide decision support for health-care workers and address the growing burden of NCDs, while advancing Rwanda’s ambition to lead on digital innovation in Africa. Early trials signal this intent: blood delivery by drone; automation of management information systems at King Faisal Hospital; rollout of national electronic medical record eBuzima; the establishment of the Health Information Exchange; a National Health Data information-exchange interoperability layer; establishment of the National Health Intelligence Center; and the Health AI Laboratory. By embracing AI early, Rwanda hopes to showcase how emerging technologies can be responsibly scaled in low- and middle-income countries.

Building on strong political will, policymakers sought to translate Rwanda’s broad ambition for using AI in health into a clear and actionable roadmap. However, several challenges emerged in the early stages.

- **Limited clarity on AI use cases:** There were limitations in being able to systematically classify, prioritise, evaluate and validate AI applications that fit with Rwanda’s specific health-system context.
- **Capacity constraints:** Limited data and AI expertise and institutional capacity within the health sector made the adoption of policy design (and its implementation) difficult.
- **Data readiness and technology infrastructure gaps:** Uncertainty around data availability, interoperability and governance (including data privacy) – as well as availability of requisite infrastructure, such as compute and connectivity – raised questions about which AI solutions were feasible.
- **Alignment with existing systems:** Policymakers were concerned that new AI initiatives might compete with existing digital-health programmes.
- **Financing sustainability:** AI adoption was often driven by partnerships, but long-term financing and strategic alignment remained uncertain.

Rwanda therefore needed a way to classify, prioritise and align AI applications with national health priorities, while building consensus across government, clinicians and partners. Using the AI in Health Framework, we worked with the Rwandan government through a three-phase process.

1. **Identify challenges:** With the Ministry of Health, we supported the identification of critical health-system challenges including primary health-care capacity, specialist shortages, fragmented information systems and rising NCD prevalence.

2. **Clarify fit:** These challenges were mapped against the framework’s domains, highlighting relevant AI applications for diagnostics, clinical care, public-health analytics and patient self-care.
3. **Scan for solutions:** Potential interventions were assessed against criteria including feasibility, impact, scalability and alignment with HSSP V.

This process engaged stakeholders across government, clinical practice, academia and development partners to secure buy-in and ensure alignment with Rwanda’s digital-health architecture. The result was Rwanda’s first national guiding policy for AI in the health sector, which has been actively guiding implementation and is being refined through ongoing stakeholder validation.

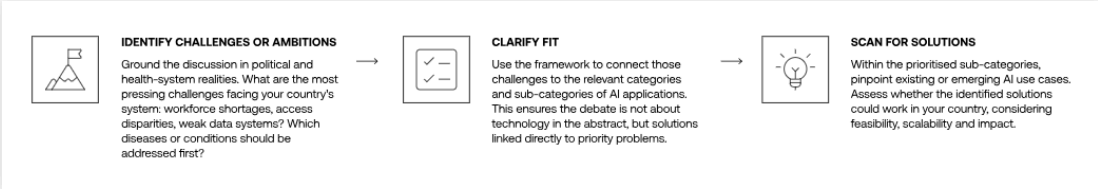
The framework has underpinned both taxonomy and process, anchoring choices in Rwanda’s system needs, structuring the policy around recognisable categories of AI use and creating a transparent prioritisation pathway. AI for diagnostics, clinical-decision support and analytics were identified as early priorities, addressing workforce shortages and supporting the effective allocation of limited resources. The framework has also helped leaders identify foundational enablers of trustworthy AI, particularly data governance and infrastructure, local workforce capacity, and regulatory and governance frameworks.

Collectively, this has supported Rwanda in translating the ambition to use AI for health, and to be Africa’s centre of excellence for health-AI innovation, into a concrete, context-specific roadmap. It is one of the first countries in Africa, and among the first globally, to develop a dedicated national approach to AI in health, establishing itself as a leader in this domain.

Rwanda also established its National Health AI Lab in November 2025 to turn its policy into action. It aims to build out the enabling environment (including computational infrastructure, local talent and validation standards), as well as piloting and scaling selected AI solutions within prioritised domains. Notably, the latter includes Rwanda’s partnership with the Gates Foundation and OpenAI on Horizon 1000.

FIGURE 2

## Drawing lessons from Rwanda: how to apply the AI in Health Framework




Source: TBI

## Enablers: What It Takes to Implement AI in Health

To move from ideas to impact, ministers often ask a second question: “How can I make this work in my country’s context?” Prioritisation alone is not enough; AI initiatives require the right system foundations. Our cross-sectoral experience across more than 45 countries shows that six capabilities consistently determine whether AI efforts in health succeed or stall.

1. **Digital infrastructure:** Digital and data systems, including EHRs, digital identity, compute capacity, connectivity, devices and cloud services.
2. **Policy and regulations:** Clear governance frameworks for data use and AI oversight, helping build public trust and enabling responsible deployment.
3. **People and skills:** A workforce equipped and willing to use AI tools, alongside strategies to attract and retain AI talent.
4. **Change management and public engagement:** Taking action to secure workforce and public buy-in, and redesign processes to support the effective adoption of AI.
5. **Finance and investment:** Sustainable funding to develop, deploy and scale AI solutions, together with effective procurement approaches.
6. **Innovation ecosystem:** Collaboration between government, industry, academia and development partners to support responsible progress.

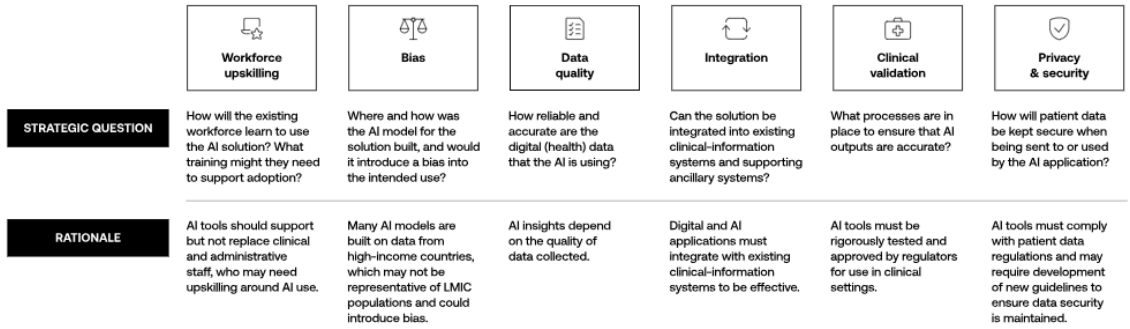
Adoption is critical to the success of any AI solution and requires capability-building for users, institutional buy-in and effective management of organisational change. Governments do not need all six capabilities in place before acting; progress often comes from advancing priority use cases while strengthening enablers in parallel. Ministries of health cannot deliver these foundations alone, so cross-government and private-sector collaboration is essential.

As governments put enablers in place, they must make explicit choices about risk. AI adoption often requires trade-offs between speed and caution: some applications allow faster experimentation and learning, while higher-stakes uses require greater safeguards. Being explicit about these trade-offs helps leaders set realistic timelines and sequence interventions effectively.

Once priorities are set, governments must also consider additional solution-specific elements to ensure safe and effective adoption.

FIGURE 3

# Solution-specific considerations for AI adoption in the health sector




Source: TBI

## The Path Forward for Governments

As global health systems face mounting pressure to deliver more, the question is no longer *whether* to use AI in health, but *how*. Leaders across governments, donor agencies, development partners and innovators must be deliberate in selecting which use cases to prioritise, focusing on those that directly address system challenges and deliver value for the public.

Built for leaders navigating ongoing political and financial pressures, TBI’s AI in Health Framework is designed for action, not theory. It helps governments identify priority health challenges, assess which AI solutions are genuinely worth backing and make clear, defensible choices. It allows governments to take control by directing investment, shaping national strategies and ensuring that choices are grounded in health-system realities, not sales pitches.

With the right foundations in place, AI can have far-reaching impact. A structured, problem-focused approach allows governments to prioritise AI tools that address their most pressing health-system challenges. In doing so it enables leaders to turn ambition into tangible improvements in services for the public.

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