Figure 5. Key considerations for the design of a lung cancer screening programme

1. **Establishing a legal or governance framework**
This should be done at an early stage of programme development. It should identify who is responsible for the screening policies, guidelines, standards, service delivery, quality assurance, quality improvement, system performance and outcome monitoring and at what level (i.e. national, regional or local).[85]

2. **Leadership, coordination and management (and/or workforce capacity)**
Workforce and capacity needs along the entire lung cancer care pathway should be assessed, as well as the potential impact of screening on increased patient flow. Avenues such as computer-aided diagnosis tools should be explored to help minimise increased pressure on radiologists.[158-161]

3. **Cost-effectiveness analysis**
Country-specific cost-effectiveness evaluations of LDCT screening are important, as is careful financial planning for any budget implications.

4. **Engagement with healthcare professionals**
Engagement of family or primary care physicians has shown to be successful in recruiting individuals at high risk of lung cancer. However, this remains a challenge in many countries; providing training for these physicians on LDCT screening is a recognised priority.[101 162-164]

5. **Engagement of participants**
Targeted approaches to securing attendance from people at high risk of lung cancer are needed, being mindful not to exacerbate existing inequalities but rather to address barriers to attendance from marginalised and disadvantaged groups.

6. **Information and data management systems**
Comprehensive, well-organised health information systems are needed to encompass all aspects of screening, including recruitment databases and image banks for recording of screening results and follow-up data.[85]

7. **Clear guidance and protocols**
Every step of the lung cancer care pathway should be guided by evidence-based standards and built into a common protocol to ensure consistent quality across all participating screening centres.[85]

8. **Resources for diagnostic work-up and treatment**
Facilities and expertise must exist for follow-up of abnormal results, confirming diagnoses and treatment of lung cancer.

9. **Programme monitoring, evaluation and continuous improvement**
The screening programme should be reviewed regularly, with the establishment of an operational and quality metric framework and resources required for ongoing course correction as it scales up. Internal and external audit frameworks should also be embedded from the outset of a programme to enable this.[85 165 166]