



# TECHNICAL AND SCIENTIFIC SUPPORT ORGANISATION – NATIONAL CHALLENGES

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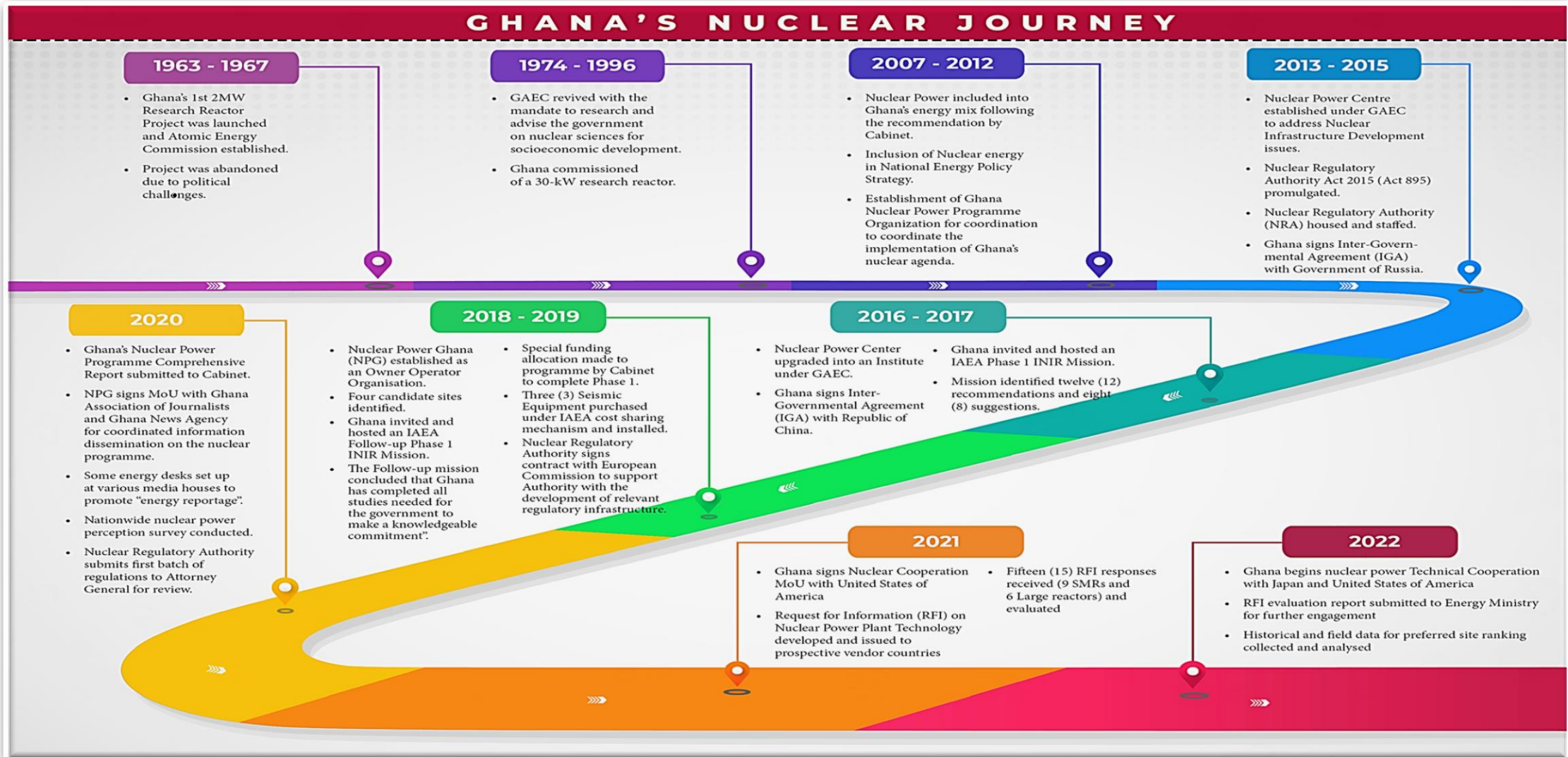
# **Presentation Overview**

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- **The Ghana Nuclear Power Programme**
  - Ghana's Nuclear Journey
  - The Basis for Ghana's Programme
- **Status of the GNPP**
  - Phase 1 Completion
  - Phase 2 Activities
- **The GNPPPO Need for Local TSO**
  - Challenges
- **Conclusions**



# Nuclear Journey so far.....



# Ghana Nuclear Programme Basis

- Ghana's nuclear programme has been justified, among others on:
  - Baseload power for industrialisation (eg., GIADEC, 1D1F);
  - Tariff reduction esp. for industries;
  - Limited hydro sources;
  - Climate change commitments;
  - Postulated decline of gas reserves (Gas Master Plan).



# Phase 1 Completion

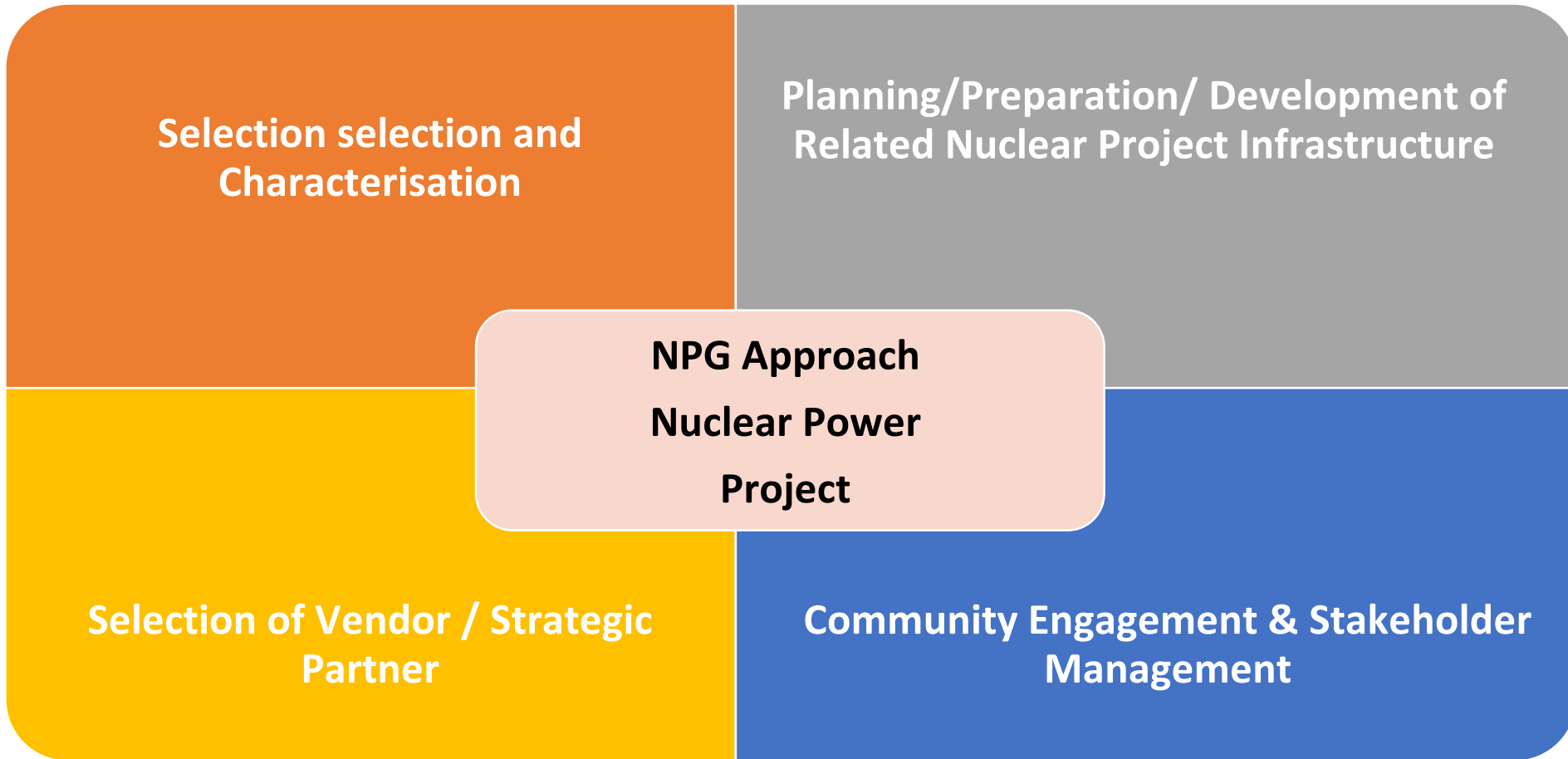
- Request of Information was issued by the Government through the Ministry of Energy
- 6 Large reactors and 9 Small Modular Reactor responses were received.
- Responses were Evaluated and report Submitted to the Government for a decision
- President announced Ghana will continue its nuclear programme development based on PCR
- Ghana collaborating with other advanced countries to build competencies
- Ghana continues with it stakeholder engagement and strengthening already existing relationships
- Preferred and backup Sites identified for the first plant



<https://gna.org.gh/2022/08/president-akufo-addo-approves-nuclear-technology-in-ghanas-energy-mix/>



# Nuclear Programme Phase 2 Activities



# Nuclear Programme Phase 2 Activities

Vendor Selection Process - RFFI

Site Approval Report for Site characterisation

Environmental Impact Assessment

Project Feasibility Report

NICE Campaign – Nationwide Programme

Completion and approval of major regulations

IAEA Missions and Advisory Services (IRRS; SEED; INIR)





# **Establishment of Technical and Scientific Support Organisations**



# **Basis for TSO Establishment**

- To leverage the expertise gained from implementing Ghana's nuclear programme as the technical arm of the GNPPO
- To utilize these experiences to provide services and support for both the proposed project organisation and regulator
- Sustainability of National Commitment



# Challenges

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- **Limited Expertise:** There is a need to train more human resources to sustain the activities of TSO and the nuclear programme
- **Capacity Building:** Training and capacity-building programmes are needed to bridge the skill gap of our current staff to a level required for the industry
- **Infrastructure Development:** Building the necessary infrastructure, such as laboratories and research facilities, requires substantial investment and time.



# Challenges

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- **Technology Transfer:** Acquiring and transferring advanced nuclear technology while ensuring the protection of intellectual property rights and national security.
- **Quality Assurance:** Implementing rigorous quality assurance measures to maintain the highest standards in research, testing, and regulatory activities.
- **Legal Framework:** Establishing a robust legal and regulatory framework to govern the operations of the TSO and ensure compliance with international best practices



# Conclusion

- Early national appreciation of the role of TSOs in a National Nuclear Power Programme is critical for robust Programme Structure
- The Agency's guidance approach to developing the infrastructure for nuclear programme may consider inclusion of TSO-tailored basic structures.





# *Thank You*

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