



# STRENGTHENING AFRICAN RESEARCH FOR DEVELOPMENT

*A Leadership Engagement Meeting on Policy and Practice*

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## Institutionalising the Model Open Science Policy of Nigeria

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# Model Open Science Policy of Nigeria

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In its preface, the Model Open Science Policy stresses that the policy sets;



**Strategic directions:** *to boost the capacity of Nigerian Universities to engage in research that grows a knowledge-based digital economy and society*



**Vision:** *to create a dynamic ecosystem driven by open science, fostering innovation, and enhancing societal trust in research and development*



**Overarching goal:** *to instil within our research community a culture of openness, collaboration, and knowledge-sharing for the ultimate benefit of society*

... it concludes, albeit cautiously that

***“The success of this policy lies in the collective efforts of policymakers, institutions, researchers, and the wider community ... to usher in a new era of scientific excellence and societal progress.”***



# Why Model Open Science Policy?



## The Model policy defines Open Science (OS)

*"Open Science, a **ground-breaking shift** in research and innovation, diverges from conventional methods by **prioritising collaboration, accessibility, and transparency across the entire scientific journey.***

*This **forward-looking approach** aims to dismantle barriers, promoting the open exchange of data, methods, and results. Ultimately, it **cultivates a more inclusive and dynamic scientific community.***

*Open Science **encompasses** various movements, including open access to publications, research data, and collaborative efforts, **all working together to accelerate discovery and champion a democratised approach to knowledge creation.***



- *Necessitate a different policy making approach to handle current and emerging challenges - Openness*
- *Adequately prioritize and strategize across the STI landscape in alignment with United Nations – Sustainable Development Goals*
- *Promote investing in R&I to shape our future*
- *Boost national competitiveness and growth*

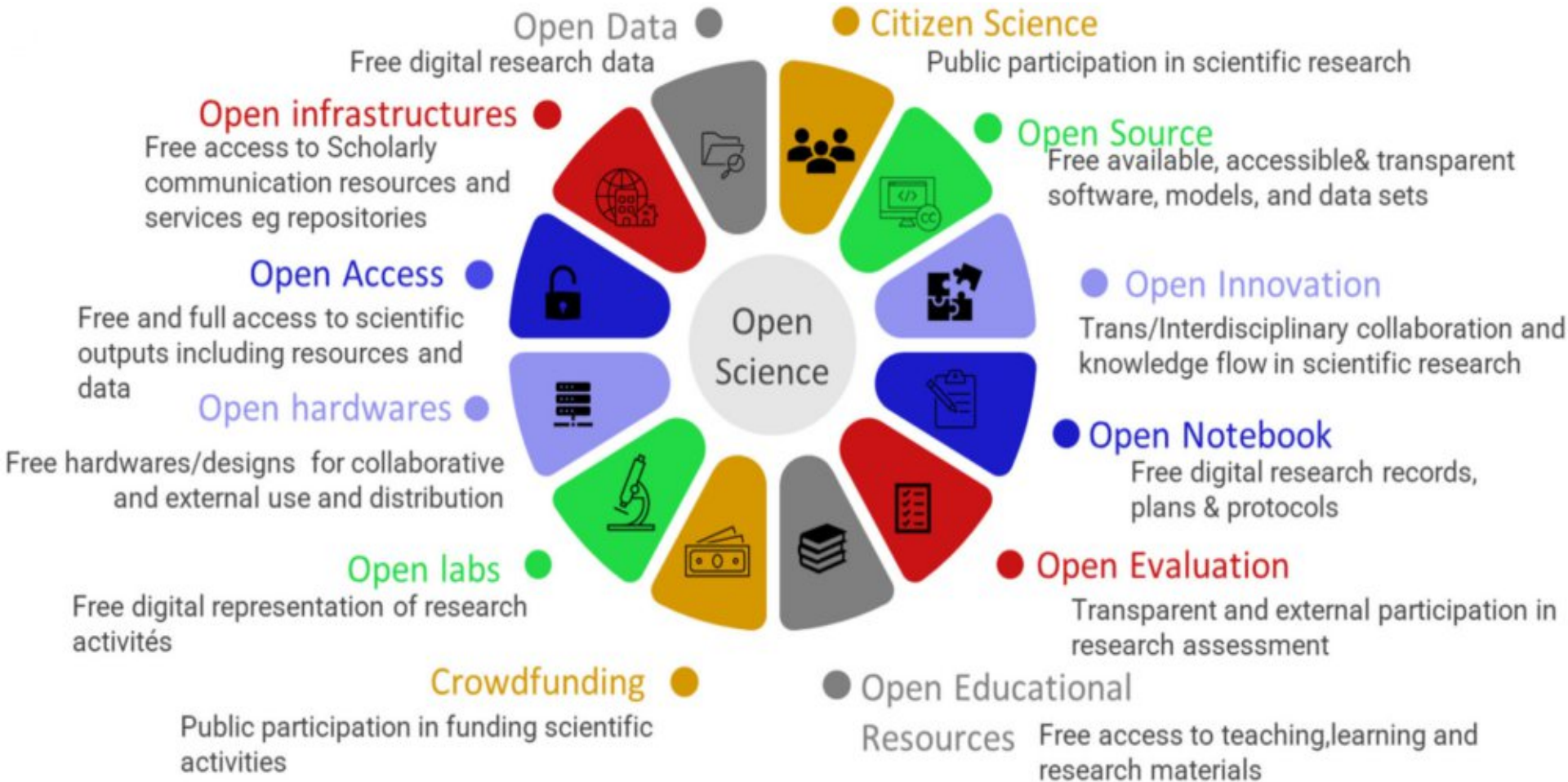


- ***Openness*** - *To promote open science*
- *The public will have the right to access all outputs from research funded by government at all levels - publicly funded research; either directly or through funding agencies and institutions.*
- *This access will cover scholarly publications, research data, research infrastructures, instruments, computing facilities, libraries, learning spaces, etc.*



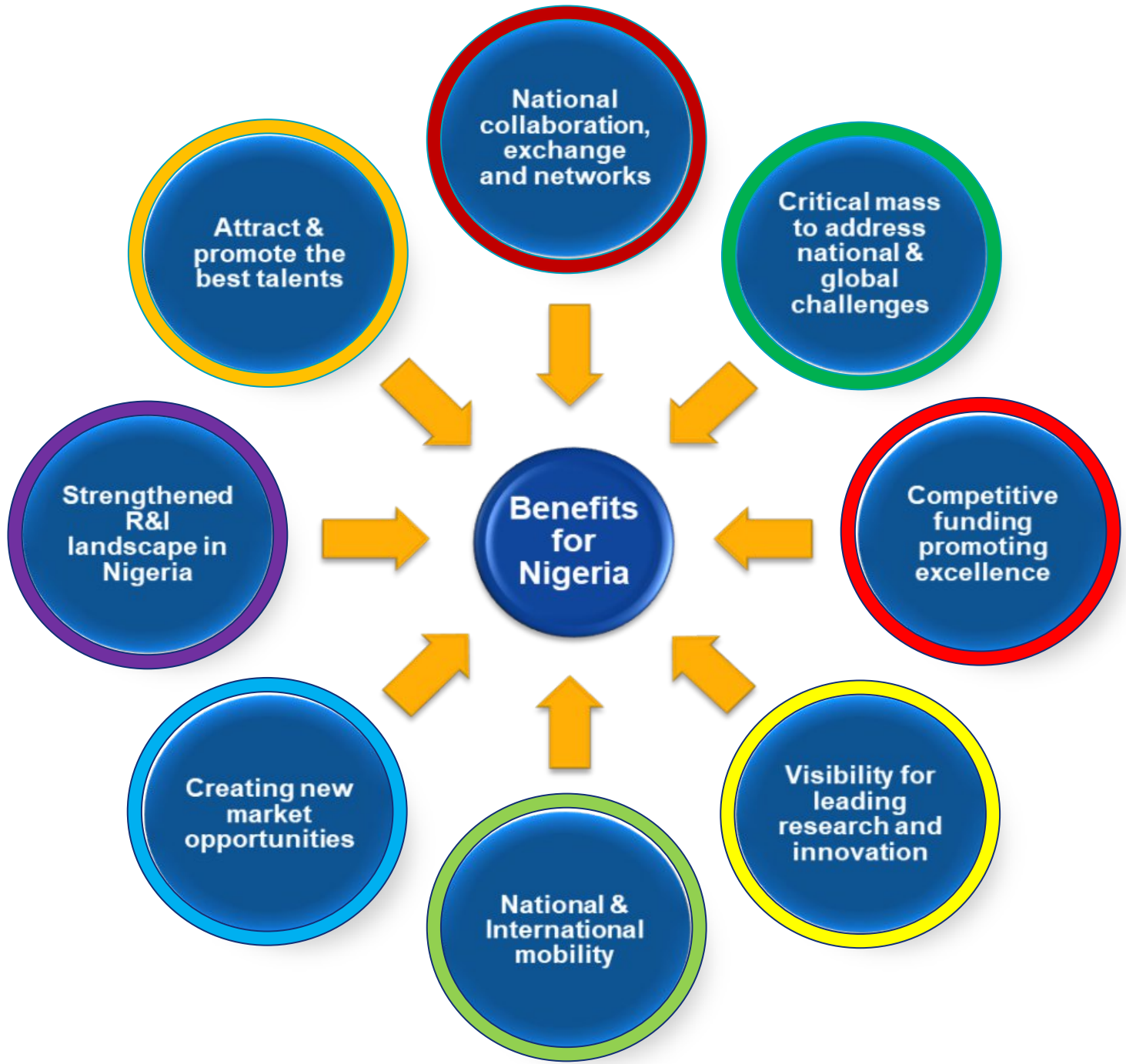
- **Open Science** seeks to ultimately evolve an ecosystem where research data, infrastructure, resources and knowledge are accessible to all, resulting in;

- *Equitable participation in science*
- *Increasing access to research outputs*
- *More transparency and accountability in research,*
- *Inclusiveness, better resource utilisation through minimal restrictions on reuse of research outputs and infrastructure*
- *Promoting constant exchange of knowledge between producers and users of knowledge*
- *Driving learning and innovation*



The elements of open science as adapted from the UNESCO recommendation 2021.

# Benefits of Adopting and Institutionalizing Open Science





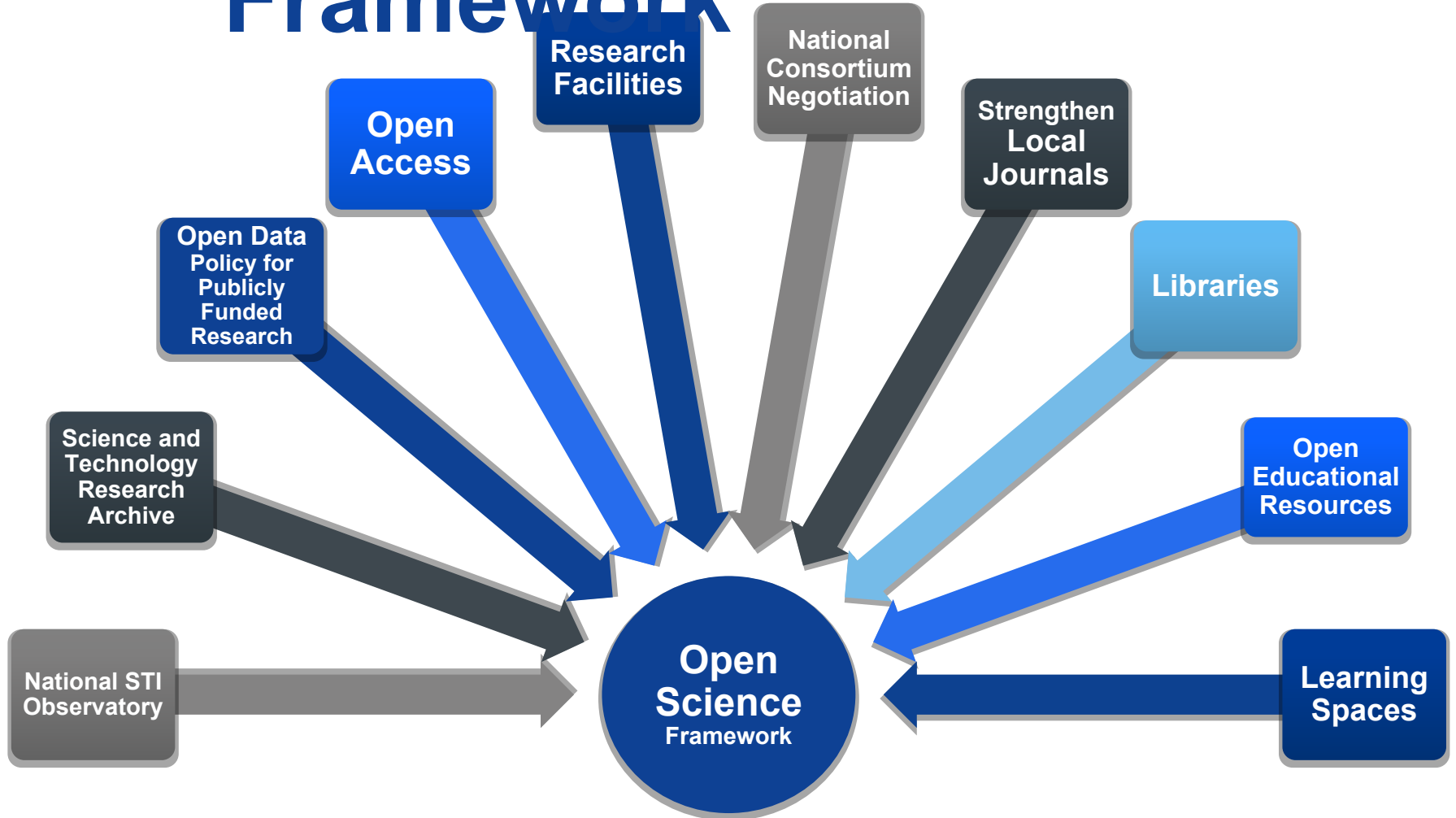
**What's Do we need to do?**

# Open Science Framework

*Adopting and institutionalising Open Science Policy will **require** a future-looking, all-encompassing Open Science Framework (OSF) that will be built primarily to;*

- **Provide access to scientific data, information, knowledge, and resources to everyone in the country.**
- **Place all who are engaging with the Nigerian STI ecosystem on an equal partnership basis**

# Open Science Framework





# Open Science

## Framework

*Open Science Framework is expected to be;*

- **Largely community-driven and supported with necessary institutional mechanisms and operational modalities.**
- **Support the development and deployment of tools and applications in all regional languages to widen the scope of accessibility and for meaningful use of data.**
- **Promote interoperability and shared ownership, among national stakeholders and international partners.**

# How to deploy?





# Strategic planning to define work programmes

- Transparency and stakeholder involvement
- Prioritisation and flexibility to align to political priorities
- Internal programme coherence & synergies with other programmes

## OS Centred Strategic R&I Plan

- \* Orientations, priorities and timelines
- \* Areas for partnerships and missions

Holistic Stakeholders Consultation



**Working group for knowledge exchange and policy formulation**

**Three-layered governance structure**

# Phased Engagement

**Phase 1** –Encourage, promote, endorse, OS policy and practices; development of infrastructure, increase awareness, training programmes, national synergy.

**Phase 2** -Open/FAIR Research Data pilot, mechanisms to monitor the policy.

**Phase 3** -Research Data, infrastructure, resources to be open and FAIR by default.

# Assessment Practices

- Adopts research/researcher assessment methods that adequately reward OS practices.
- The Policy actions will have a higher chance of lasting if OS practices are incentivized.
- •OS practices embedded in the entire research community

# Assessment Practices

- Changes researchers' evaluation system at different stages of the researchers' career.
- Employ multiple rather than single parameters to promote OS healthy engagement.
- Best possible approach; multi-dimensional criteria evaluation methods, considering what is required by or relevant to the researchers' career/recruitment.
- Adapt OS centred assessment schemes

# Awareness, skills and trainings.

- Abroad awareness-raising campaign
- Training on Open Access/Science becomes integral part of higher education courses
- Set up skills, competencies and training centres

# Governance and sustainability

- Organize governance and funding in a way to reinforce the policy
- **Set up effective Coordination and harmonisation** of existing system for synergy
- Evolve **multi-actor OS system and not a no one-size-fits-all solutions**

# TOP THREE INNOVATION ECONOMIES BY REGION



Source: Global Innovation Index Database, WIPO, 2022.

# A Reality – The Elephant in the Room!





## ***A Reality – The Elephant in the Room!***

- *Open science is relatively easy to discuss as a principle. Much more difficult and sometimes tending towards impossible within our national space is the practice of;*
- *Open data, open access publishing, open infrastructure, and open to society; much more difficult to realise.*
- *Developing, managing, curating and using large and diverse data volumes, incentives, methods and standards for data sharing, maintaining security and ethical standards*
- *Developing the systems and software to undertake all these tasks and keeping abreast of the rapidly evolving state of the art in data science has proven to be an tedious task.*

*...however, the real elephant in the room and the strongest challenge against institutionalizing OS is rather more personal and thus communal*

***Collective Perception  
Inertia***

# *The Elephant in the Room – Collective Perception Inertia*

**Collective perception:** *how the members of a society similarly interpret thoughts, ideas, and experiences and information.*

- **Collective perception summersault** is required
- We must immediately **change our perceptual projections**, if we must **change our behaviour**.
- We must provide a new way to look at the same issue and information and evolve **positive, progressive** and **functional** engagement protocols.
- We must **critically review** our **motivation, culture,** and **expectations** regarding development as a whole and R&I and OS.

# Closing Thought

- Globally, Nigeria like most Africa countries have very poor performance records with implementation of global policies due to the lack of strong systems, stable leadership and integrity and poor inter-institutional engagement.
- The institutionalising of the model open science policy must not follow similar trajectory.
- The framework and related key policies necessary for the advocacy and institutionalisation and industrialization of OS in Nigeria both at the national and institutional levels must be worked out and followed through.
- These instruments must tackle acquisition of data, usage and management, publication, translation, and re-use, research resources access and usage, etc.

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**Thank you**