

# An Introduction to ISO 14064

## CEAA

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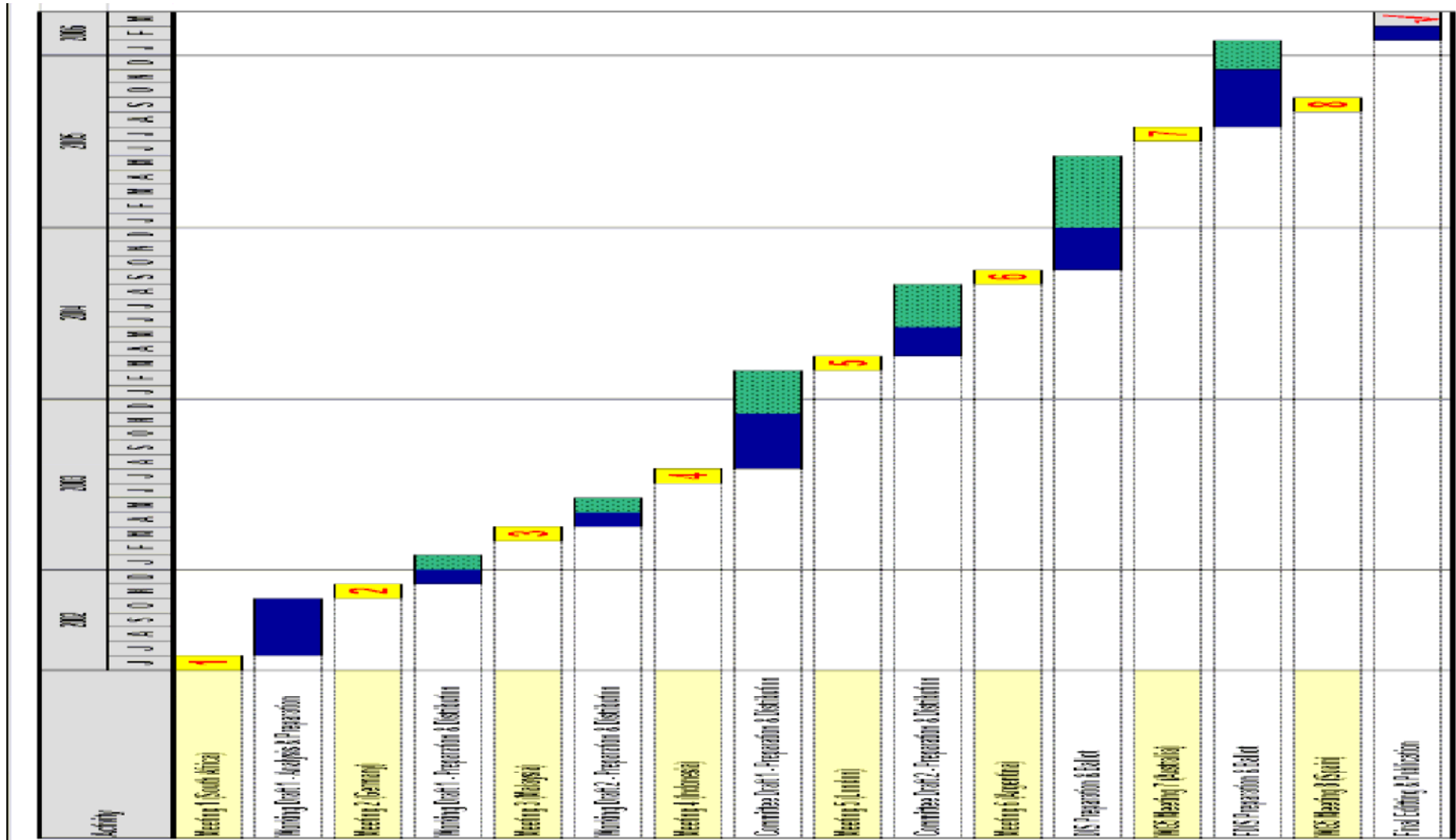
# Agenda

1. ISO and Standards Development
2. ISO 14064 – Part 1- **Quantification and Reporting at the Organizational Level**
3. ISO 14064 – Part 2 - **Quantification and Reporting at the Project Level**
4. ISO 14064 – Part 3 – **Validation and Verification of Greenhouse Gas Assertions**

# ISO and Standards Development

- ISO - the International Organization for Standardization – was established in 1947 and is based in Geneva, Switzerland;
- ISO – a non-governmental organization – is a federation of the national standards bodies of 149 countries (one per country) and 500+ international/regional liaison members;
- ISO is comprised of 3,000+ technical groups that develop standards with the broadest possible base of stakeholder groups;
- ISO develops standards by transparent, consensus-based procedures based on national input;
- ISO meetings attract some 50,000 experts a year;
- ISO has published over 15,000 international standards;
- ISO standards are designed to be implemented world-wide.

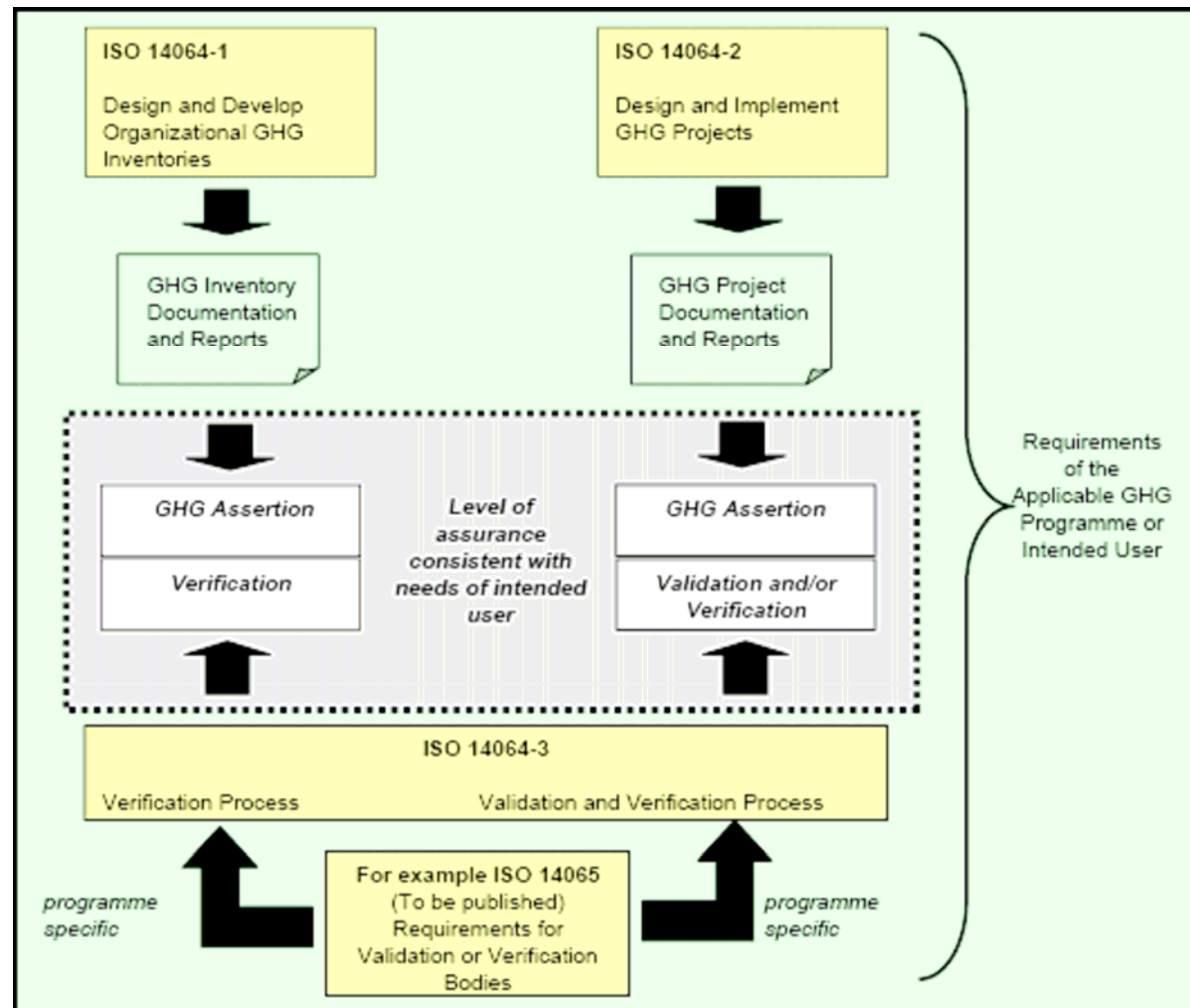
# ISO 14064 Development



## ISO 14064 Objectives

- Develop flexible, regime-neutral tools for use in voluntary or regulatory GHG schemes;
- Promote and harmonize best practice;
- Support the environmental integrity of GHG assertions;
- Assist organizations to manage GHG-related opportunities and risks; and
- Support the development of GHG programmes and markets.

# ISO 14064 Interrelationships



# ISO 14064 – Part 1- Quantification and Reporting at the Organizational Level

- General
  - Scope
- Requirements

# ISO 14064 – Part 1 – Organizations

## Scope of Application

Multinational companies to small consultancies, local NGOs etc.

Designed to work with numerous emerging national and regional programs.

- ISO 14064 is GHG programme neutral. If a GHG programme is applicable, requirements of that GHG programme are additional to the requirements of ISO 14064.
- NOTE: If a requirement of ISO 14064 prohibits an organization or GHG project proponent from complying with a requirement of the GHG programme, the requirement of the GHG programme takes precedence.



# ISO 14064 – Part 1 – Organizations Requirements

## Organisational

‘Building block’ approach:

- source – facility – organisation.

Control or Equity share:

- reference to GHG Protocol for guidance.

## Operational

Requires:

- Identification of emissions and removals;
- Quantification of direct emissions;
- Quantification of indirect emissions (electricity, heat & steam);
- Separate quantification of biomass emissions.

Optional:

- Quantification of other indirect emissions.

# ISO 14064 – Part 1 – Organizations Requirements

## Quantification

Sets out 5 steps for quantification with clear requirements for documentation, explanation and justification:

1. identification of GHG sources;
2. selection of quantification methodology;
3. selection & collection of GHG activity data;
4. selection **or development** of GHG emission factors;
5. calculation of GHG emissions.

Includes clause for exclusions:

*...may exclude from quantification direct or indirect GHG[s]...whose contribution...is not material or whose quantification would not be technically feasible or cost effective. The organization shall explain GHG[s]...excluded from quantification.*

# ISO 14064 – Part 1 – Organizations Requirements

## Inventory Components

### GHG emissions and removals

- direct GHG emissions for each GHG;
- GHG removals;
- energy indirect GHG emissions;
- other indirect GHG emissions;
- direct CO<sub>2</sub> emissions from the combustion of biomass.

### Activities to reduce emissions:

- Directed actions: actions within boundaries;
- Projects: actions outside boundaries or purchased offsets;

### Base year

### Inventory recalculation

### Uncertainty

# ISO 14064 – Part 1 – Organizations Requirements

## Inventory Quality

GHG information management procedures:

- 5 required elements;
- 11 recommended elements.

Record keeping:

- Requires document retention procedures to enable verification.

# ISO 14064 – Part 1 – Organizations Requirements

## Reporting

Recommends (but does not require) a report ; however, if an organisation makes a public GHG assertion claiming ISO conformance then they shall make available to the public a GHG report.

If there is a decision to report then the standard provides

Report planning:

- 8 recommendations.

- Report content:

- 17 requirements;
- 11 recommendations.

# ISO 14064 – Part 1 – Organizations Requirements

## Verification

Recommends (not require) to undertake verification consistent with:

- Needs of intended users;
- ISO14064-3.

Written for the organisation whose assertion is being verified, and includes recommendations on:

Preparing for verification;

Verification management:

- Verification plan for the organisation;
- Verification process;
- Competence of verifiers;
- Verification statement.

# ISO 14064 – Part 2- Quantification and Reporting at the Project Level

- General
  - Scope
  - Project Cycle
- Requirements

## **ISO 14064 – Part 2 - Projects Scope**

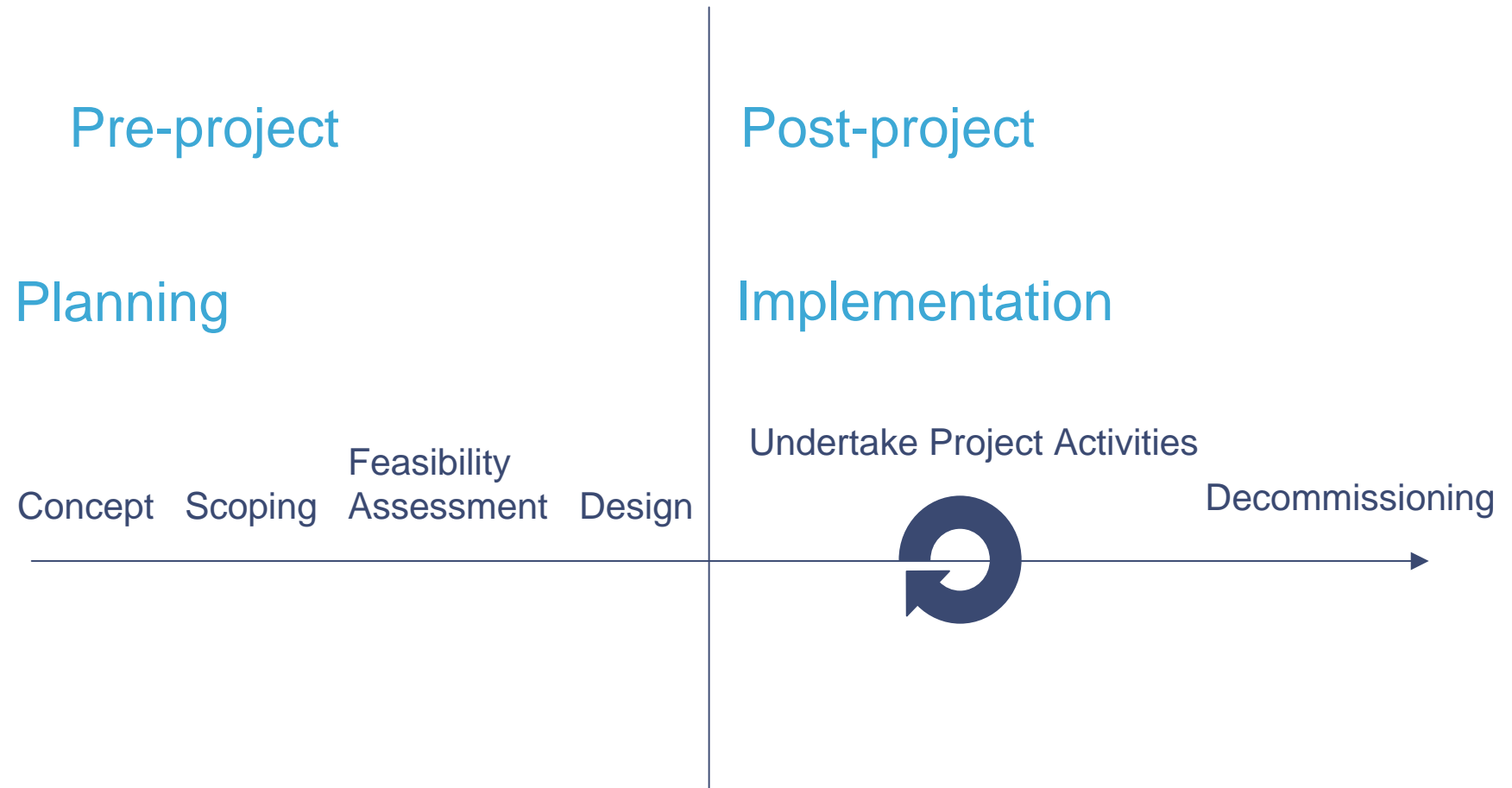
Designed to work with numerous emerging national and regional programs.

Designed to work small to large projects, and aggregated projects.



# ISO 14064 – Part 2 – Projects

## Project Cycle



# ISO 14064 – Part 2 - Projects Requirements

## Description

Describe the project in a GHG project plan

## Project SSRs

Identify GHG sources, sinks and reservoirs (SSRs)

- Controlled by the project proponent
- Related to or affected by the GHG project

This requires a life cycle approach.

# ISO 14064 – Part 2 - Projects Requirements

## Identifying SSRs

- Identify the potential elements that are associated with the devices or activities of the project. Typically, these are elements that are owned or controlled by the project proponent and are a result of the operating of the project.
- Identify the potential elements that are physically related to the project through material and energy flows in and out of the project. Trace materials and energy upstream and downstream of the project.
- Identify the potential elements that are physically related to the project through the manufacturing and disposal cycle of the project's service(s) or product(s).
- Identify the potential elements that are economically affected by the project. Consider the economic and social consequences of the project (compared to the baseline), look for activities, market effects, and social changes that result from or are associated with, the project activity.

# ISO 14064 – Part 2 - Projects Requirements

## Baseline Scenario

Identify and justify the baseline scenario and identify its GHG SSRs.

Justification of the baseline scenario is based on the concept of functional equivalence

*“The project proponent shall demonstrate equivalence in type and level of activity of products or services provided between the project and the baseline scenario”*

# ISO 14064 – Part 2 - Projects Requirements

## Quantification

Quantify SSRs for the project and the baseline scenario

- are derived from a recognized origin,
- are appropriate for the GHG source or sink concerned,
- are current at the time of quantification,
- take account of the quantification uncertainty and are calculated in a manner intended to yield accurate and reproducible results, and
- are consistent with the intended use of the GHG report.

## Reduction or Removal Calculation

Calculate emission reduction or removal enhancement

*Project – Baseline Scenario in CO<sub>2</sub>e*

# ISO 14064 – Part 2 - Projects Requirements

## Data Quality and Monitoring

Manage data quality and monitor and document the GHG Project

## Validation/Verification

Validate/verify the GHG project (optional)

## Reporting

Requires a report to the intended user.

However, if an organisation makes a public GHG assertion claiming ISO conformance then they shall make available to the public a GHG report.

# ISO 14064 – Part 3 – Validation and Verification

- General
  - Scope
  - Relationships
  - Validation vs Verification
- Requirements

# ISO 14064 – Part 3 – Validation and Verification Scope

Describes the process for GHG-related validation or verification and is:

- Not mandatory  
(e.g., you can use Part 1 or Part 2 without using Part 3)
- Flexible  
(e.g., you can use Part 3 without using Part 1 or Part 2)
- Consistent  
(e.g., is design to work well with ISO 14064 Part 1 & Part 2)

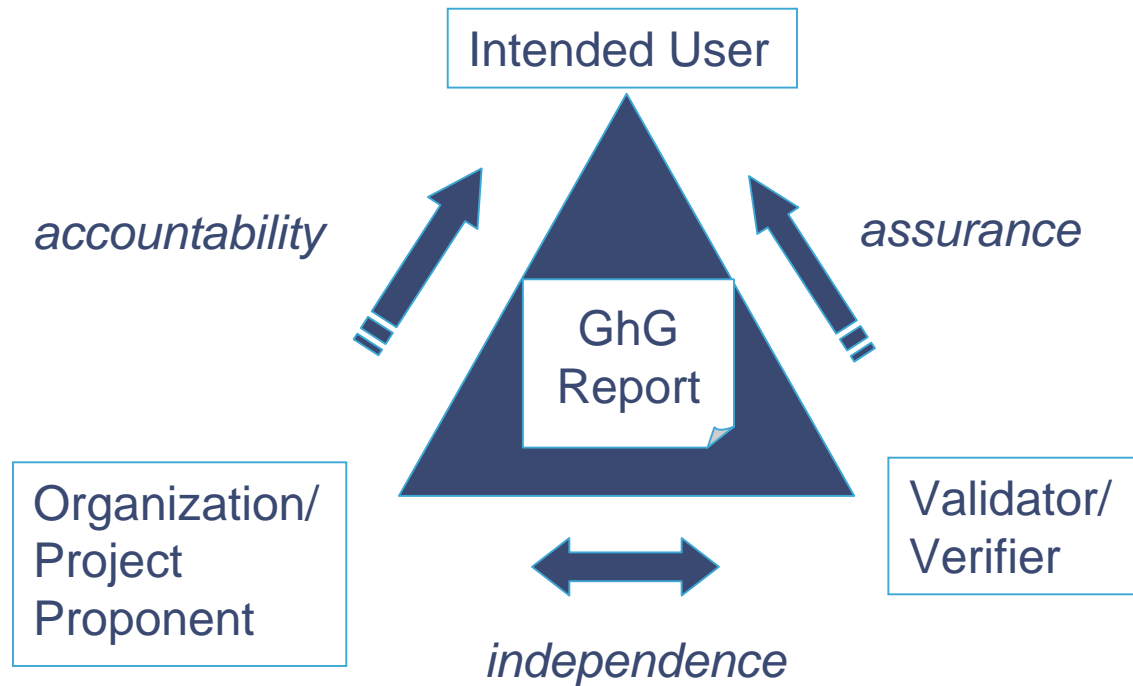


# ISO 14064 – Part 3 – Validation and Verification Scope

Designed to undertake the process for GHG-related validation or verification in:

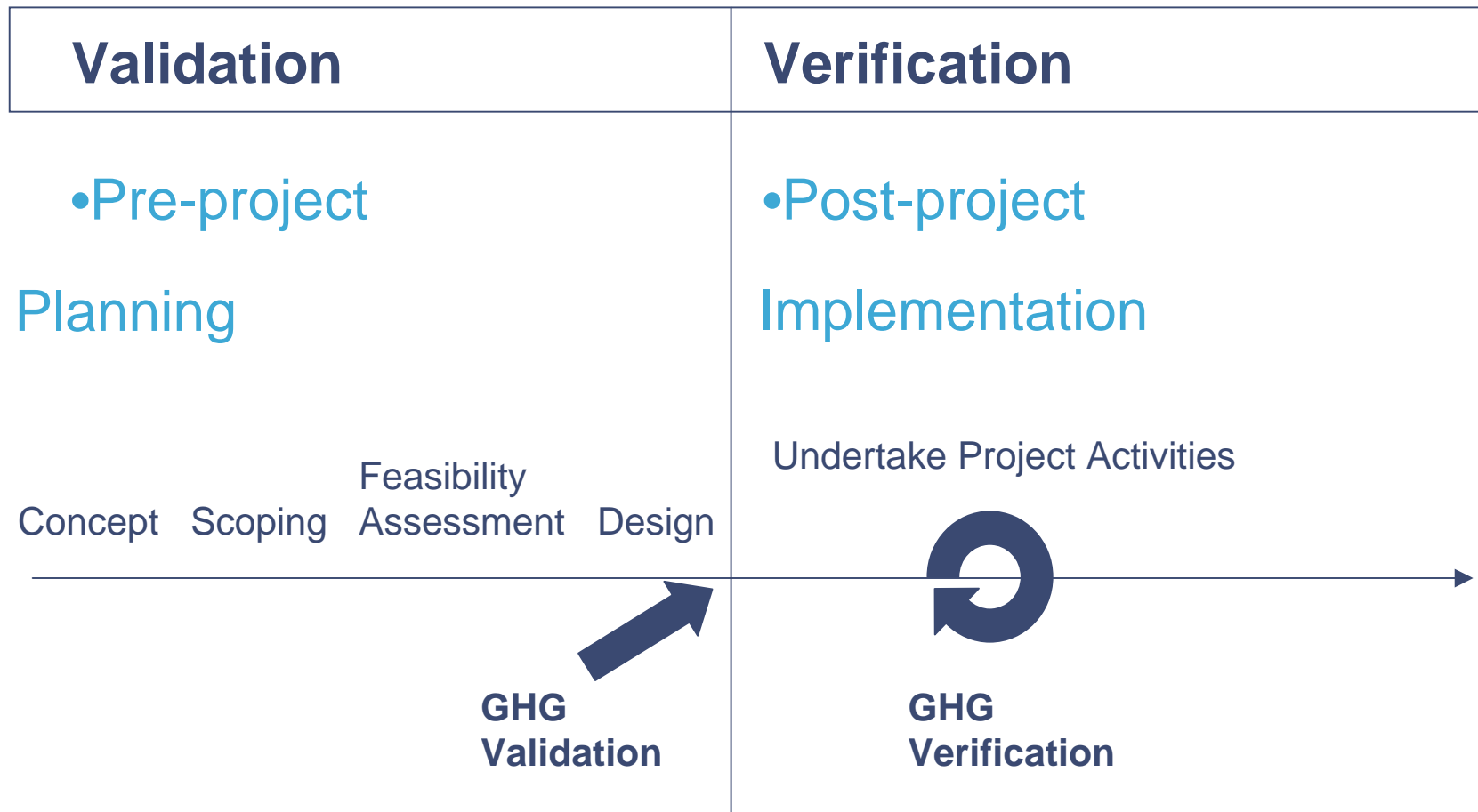
- Different GHG schemes  
(e.g., mandatory, voluntary, external, internal)
- Different types of situations  
(e.g., organizations, projects)
- Different types of industries  
(e.g., forestry, oil & gas)
- Different sizes of companies  
(e.g., small, medium, large)

# ISO 14064 – Part 3 – Validation and Verification Relationships

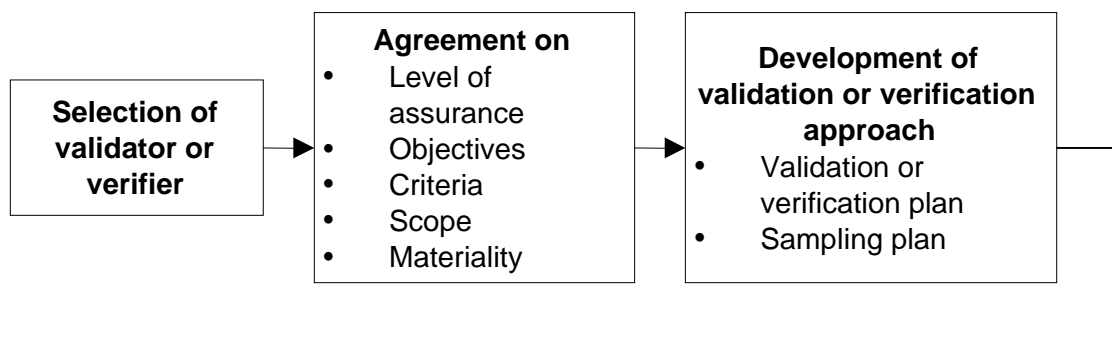


# ISO 14064 – Part 3 – Validation and Verification

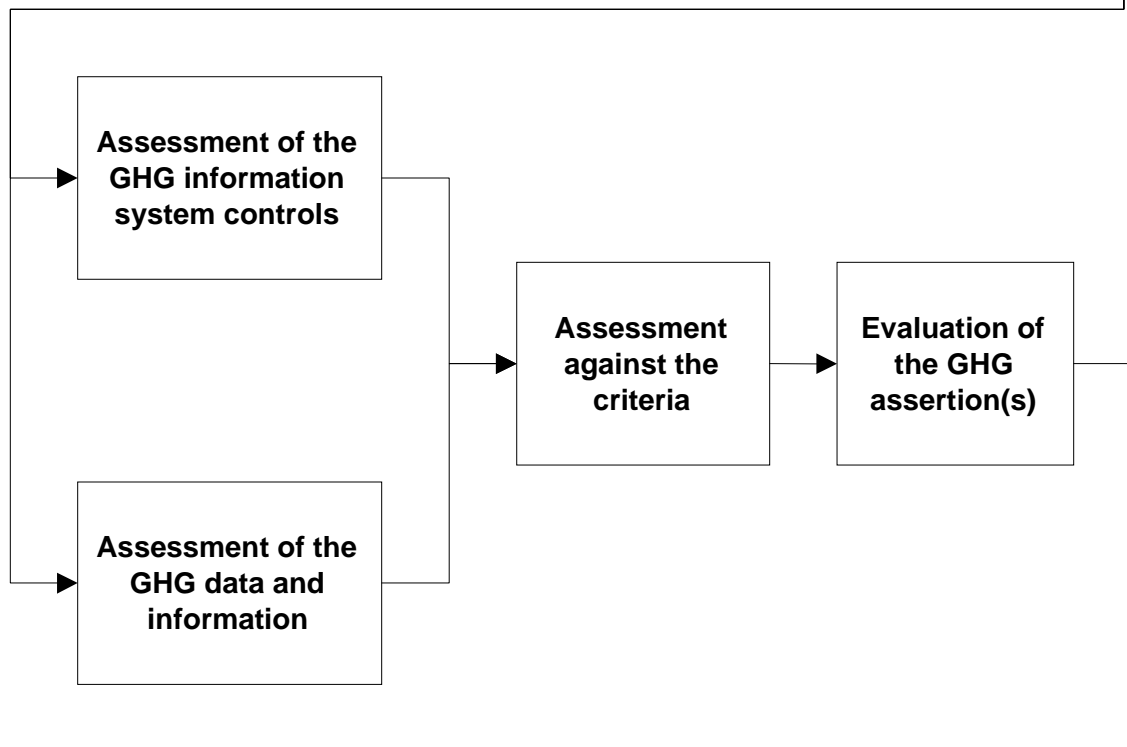
## Validation vs Verification



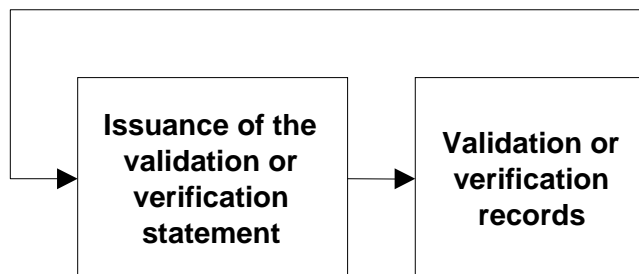
## Planning



## Execution



## Completion



# Thank you.

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