



SNS COLLEGE OF TECHNOLOGY

**An Autonomous Institution
Coimbatore - 35**

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A+ Grade
Approved by AICTE , New Delhi and Affiliated to Anna University , Chennai.

DEPARTMENT OF AGRICULTURE ENGINEERING

19AGT201 – SURVEYING AND LEVELING

II – YEAR III SEMESTER

UNIT 1 – PRINCIPLES OF SURVEYING

TOPIC 1 – INTRODUCTION



Introduction of Surveying



- ❖ Art of determining the relative positions of points on above or beneath the surface of earth.
- ❖ Achieved by
 - Measurement of Distances
 - Measurement of Directions
 - Measurement of Elevations
- ❖ Limited to operations with representation of ground features in plan.





What does survey mean????

- ❖ The art of making measurements of the relative positions of natural and man-made features on the Earth's surface, and the presentation of this information either graphically or numerically.





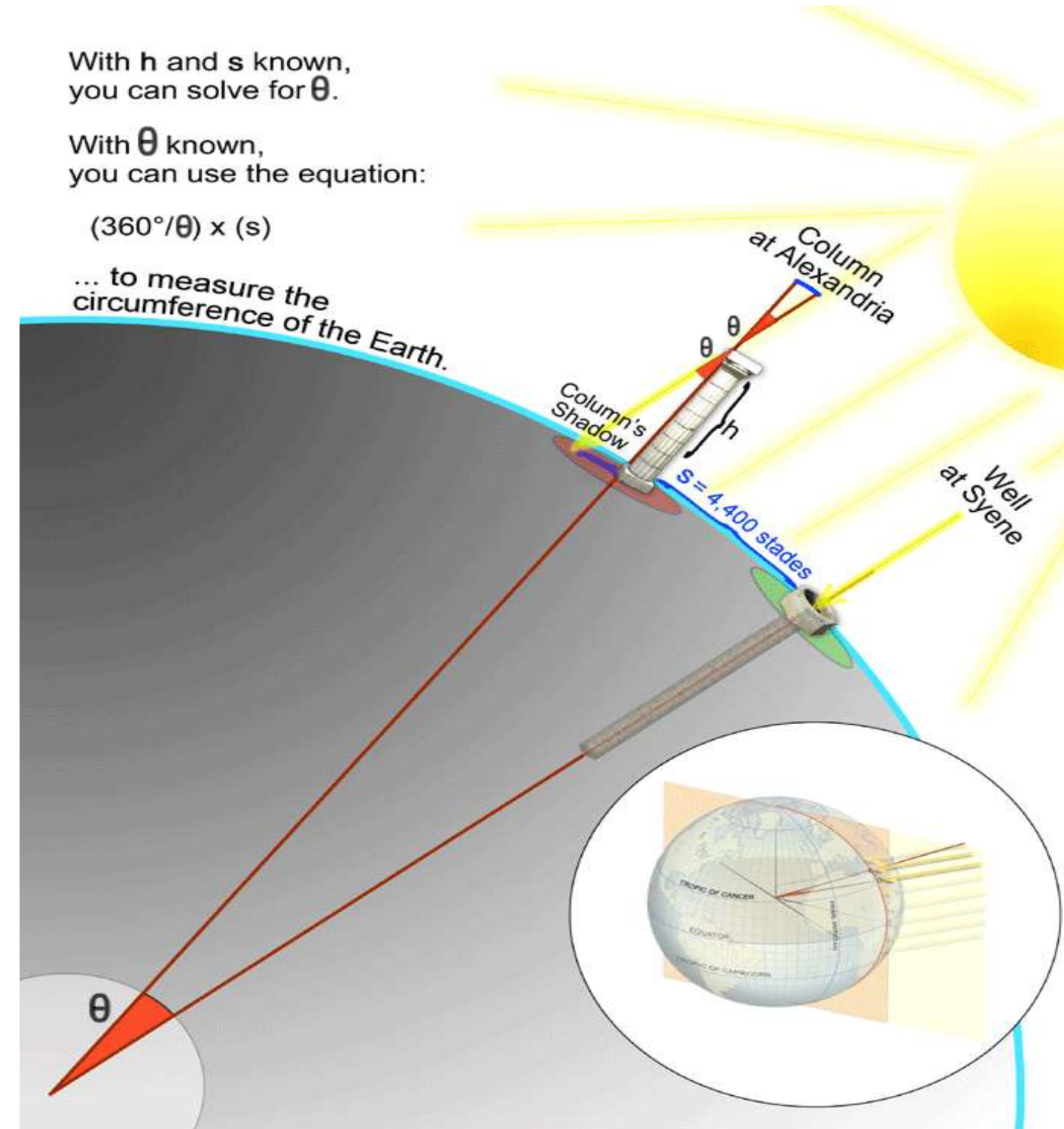
Surveying

With h and s known,
you can solve for θ .

With θ known,
you can use the equation:

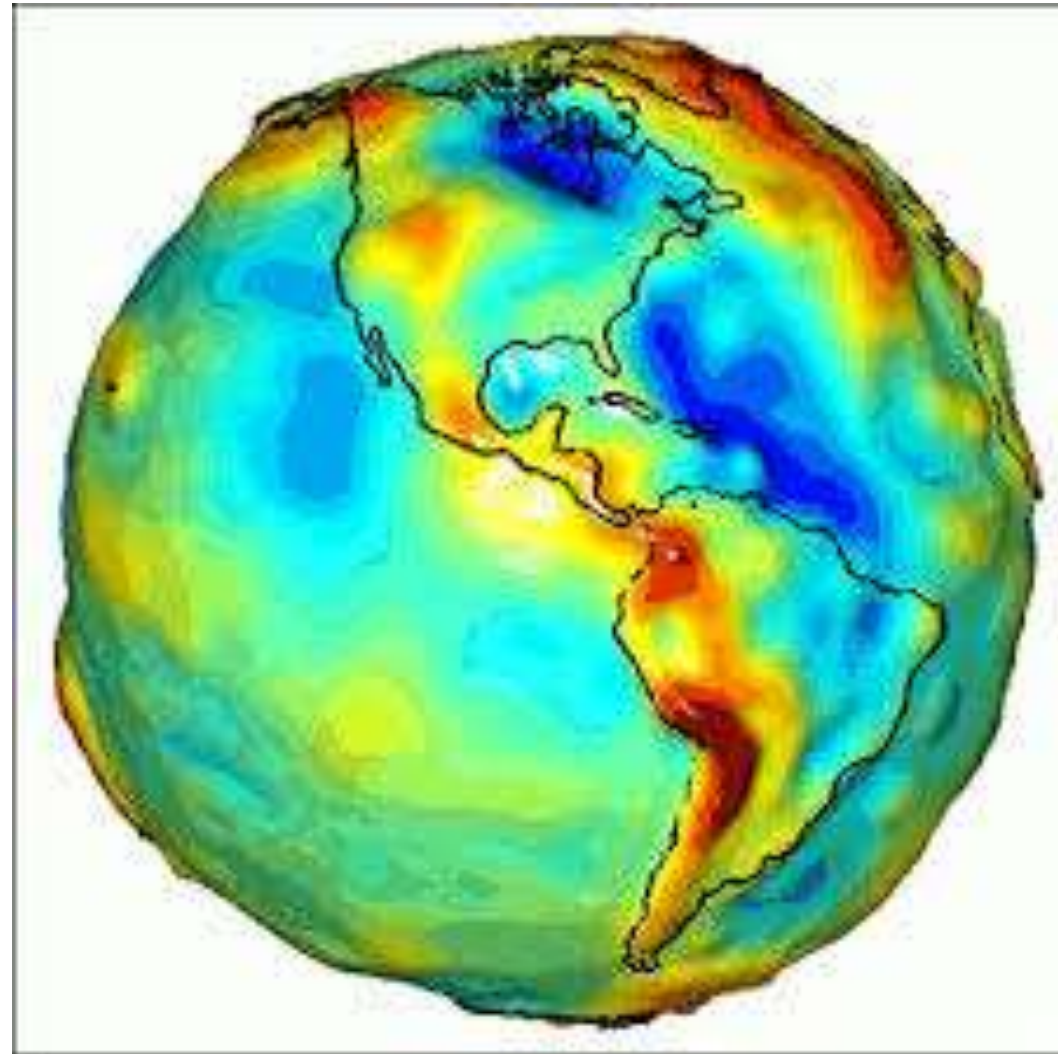
$$(360^\circ/\theta) \times (s)$$

... to measure the
circumference of the Earth.





Surveying - Science and Profession !!!



❖ Surveying vs. Geodesy

In most languages there are no distinctions between the terms

in English (according to Vanicek - Krakiwsky):

- Surveying: the practice of positioning
- Geodesy: the theoretical foundation of surveying

Geodesy is the scientific background of Surveying as a profession.



The role of Surveying



Surveyors are needed:

- To maintain the geometric order during the construction process
- To provide fundamental data for the design and planning process
- To provide quantity control during the construction process (for example: earthwork quantities)
- To monitor the structure after the construction (subsidence, deformations, etc.)





Surveying



Wrong geometry – the structure is not functional!



Laying them in the appropriate geometry, outstanding structures can be created!



Assessment



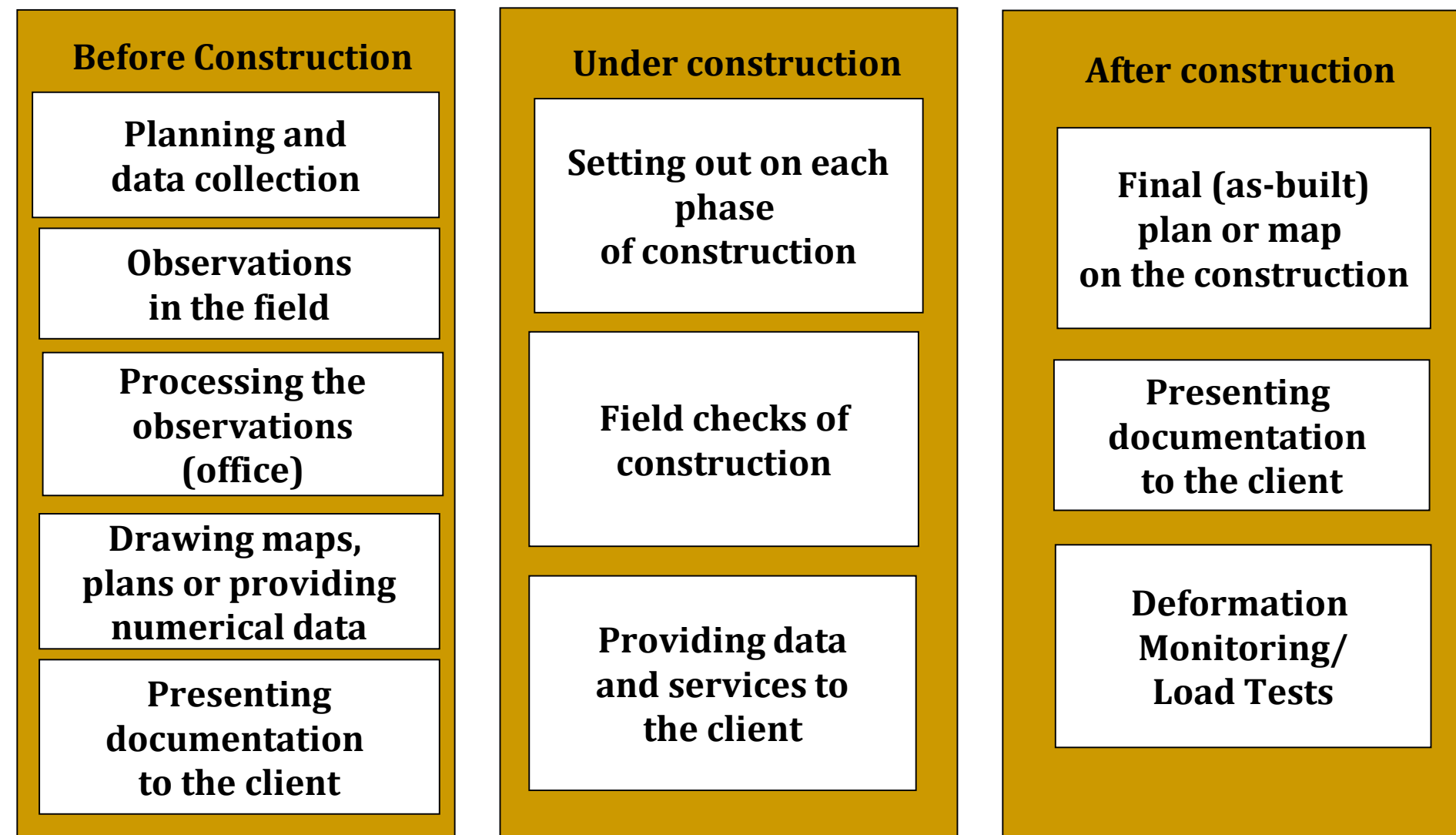
- **Why used in Agriculture**
- **Why is it important**





The role of Surveying !!!!

Surveying activities during the construction process





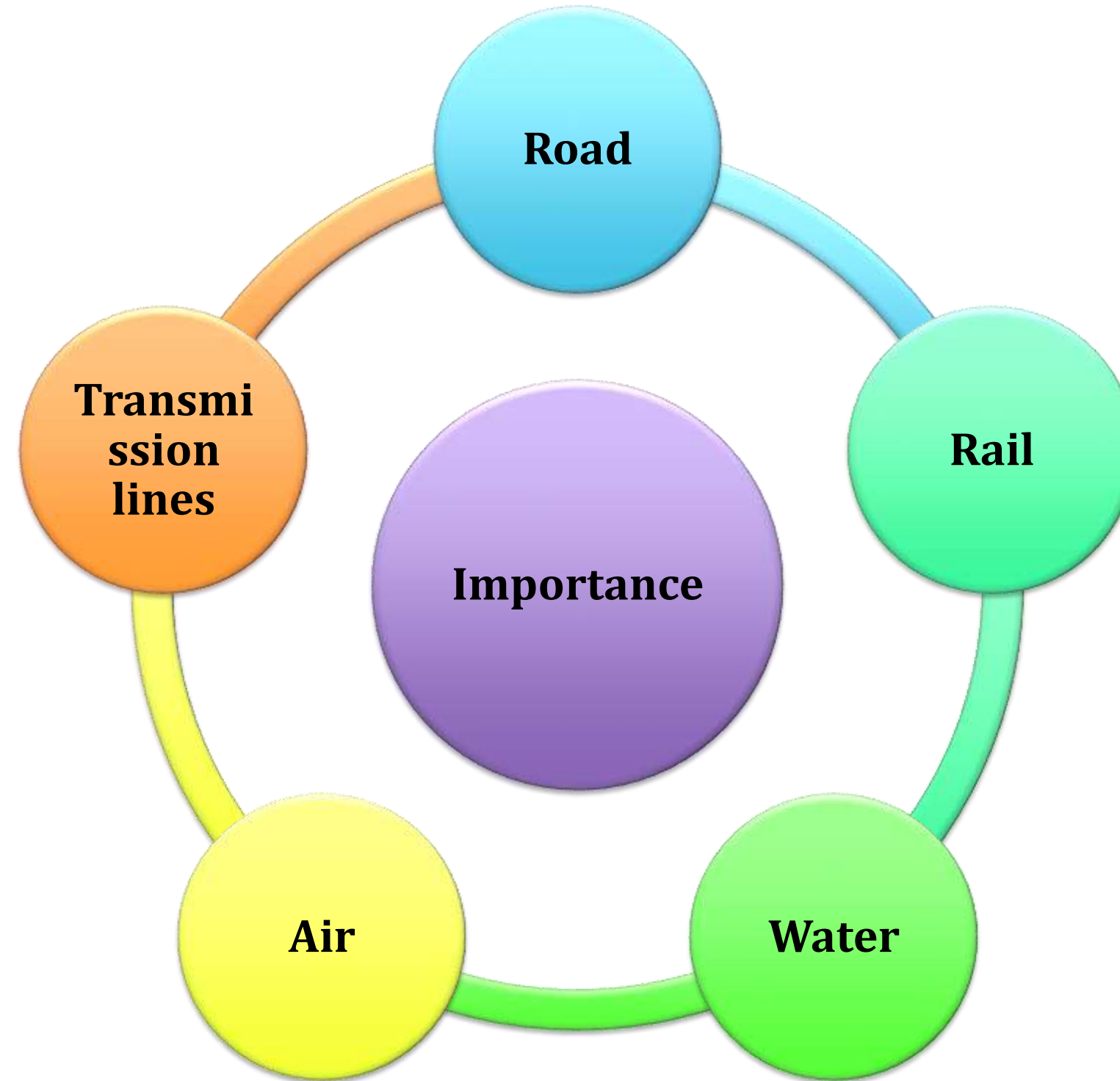
Importance



- ❖ Used at many engineering projects
- ❖ Water supply & irrigation Schemes
- ❖ Rail roads
- ❖ Transmission lines
- ❖ Mines bridge
- ❖ Buildings



Importance





Objectives

- ❖ To prepare a plan or map showing all features of area under consideration

PLAN:

- ❖ Projection of ground and features upon it on horizontal plane.
- ❖ Done by adopting to some scale





Objectives



Prepare
a map

Prepare
a plan



See You at Next Class!!!!