

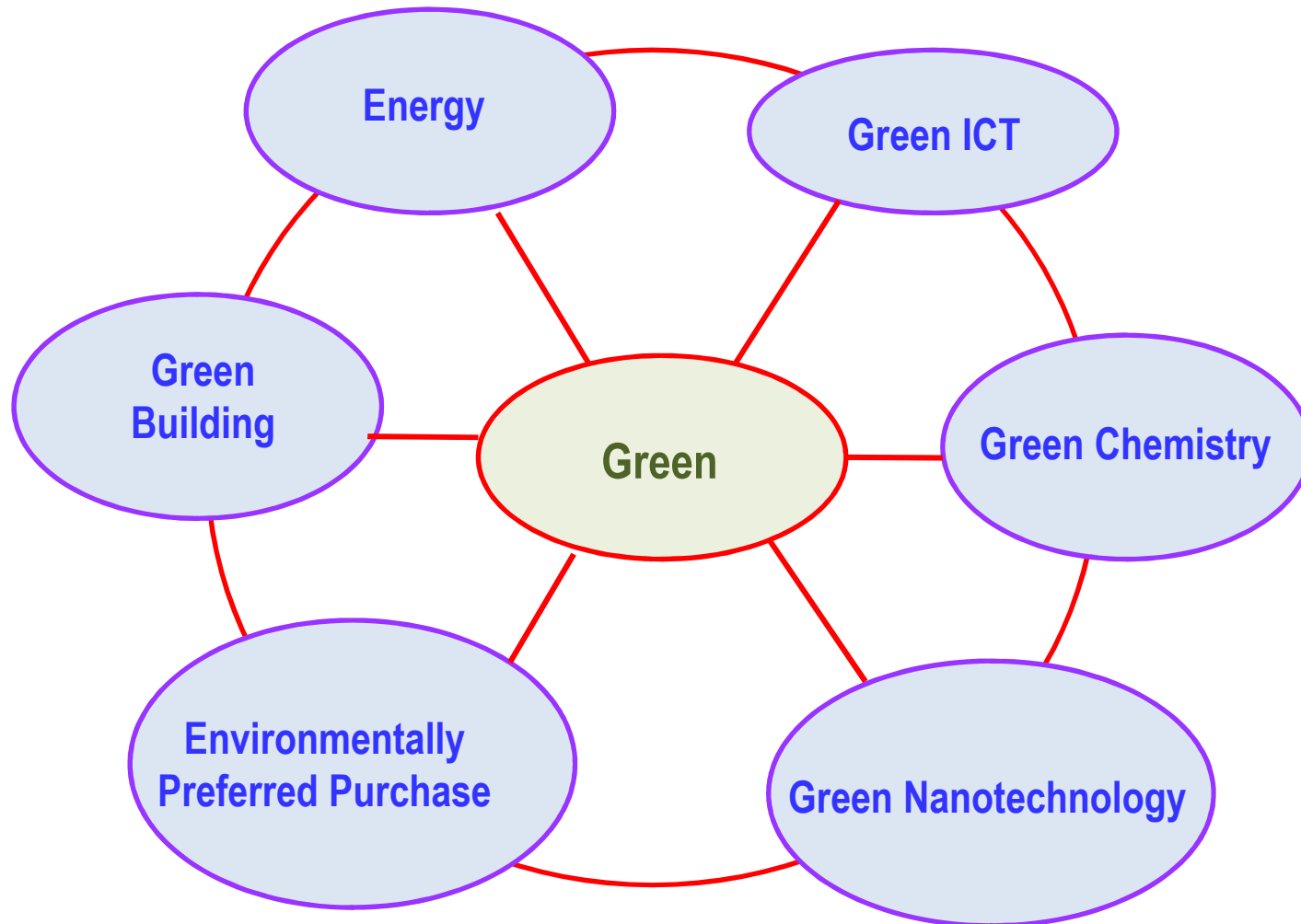
GREEN ICT - AN EMERGING SOLUTION

By

Ir. Dr. Lee Aik Heng

 **es** Enviro Management Sdn. Bhd.

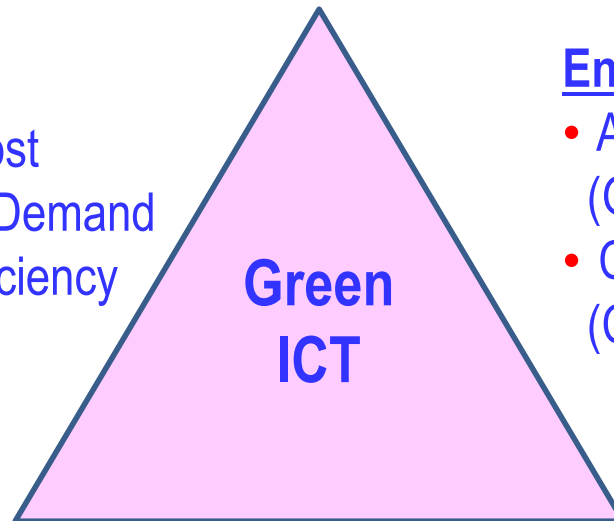
Going Green



3E For Green ICT

Energy

- Rising Energy Cost
- Growing Energy Demand
- Need Energy Efficiency



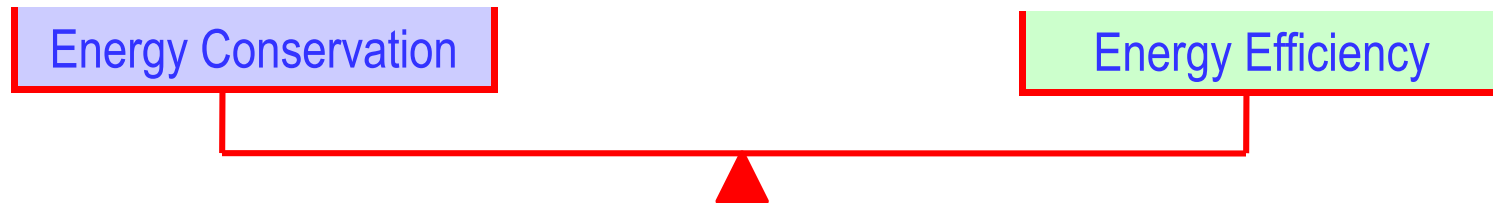
Environment

- Awareness of Environmental Issues (Global Warming etc.)
- Climate Change and Pollution (Carbon Emission)

Economy

- Rising Consumer Expectations
- Rising Costs of Raw Materials and Workforce

Energy



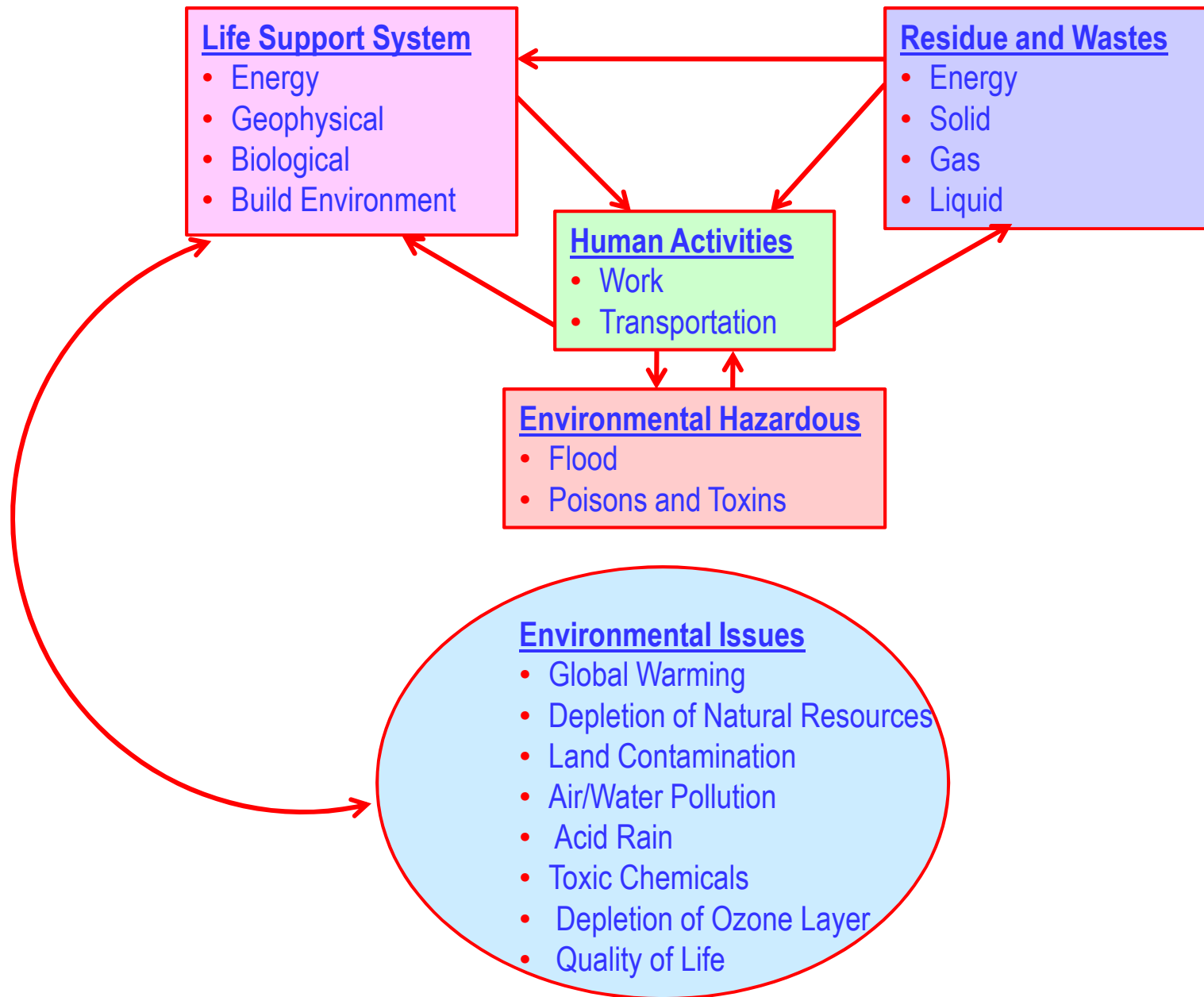
Energy Conservation

- Efforts made to reduce energy consumption in order to preserve resources and reduce environmental pollution.
- Efforts made to facilitates replacement of non-renewable resources with renewable energy

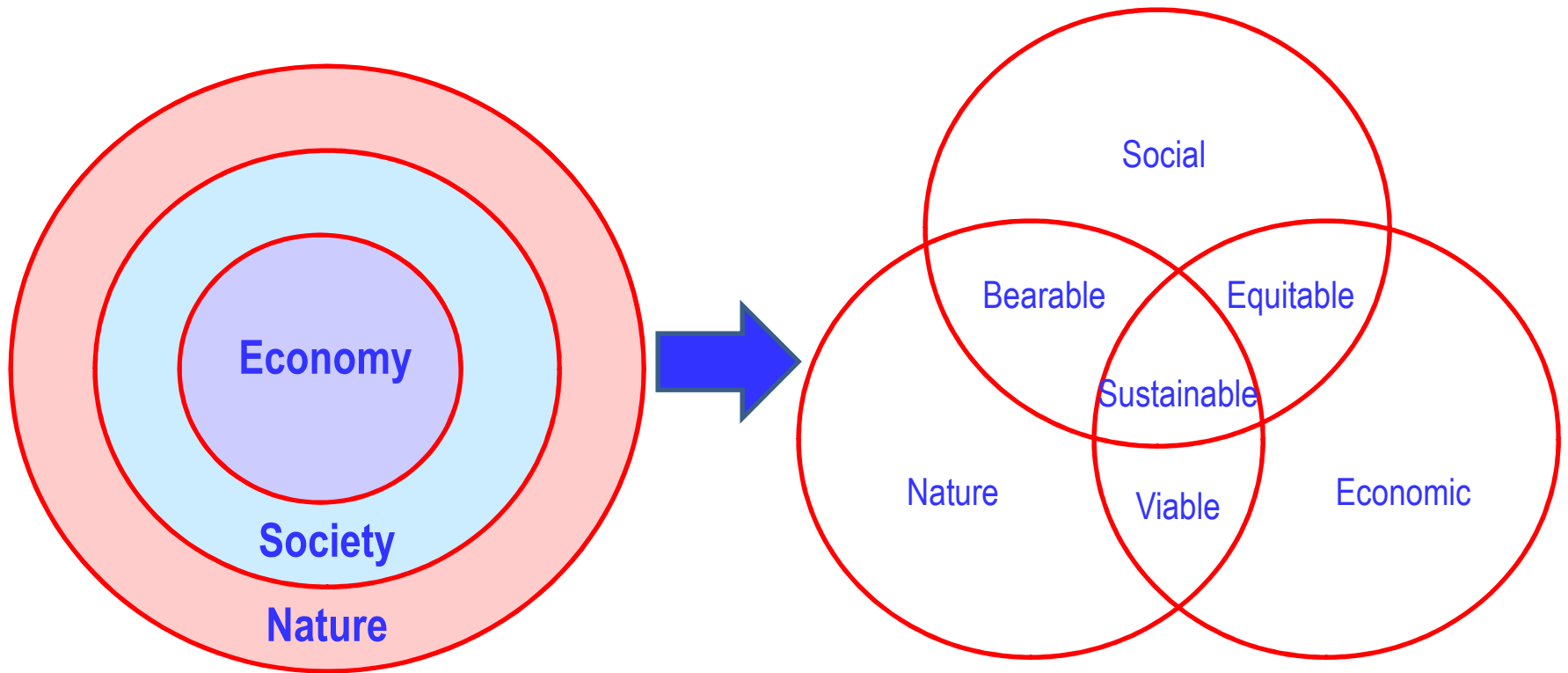
Energy Efficiency

- Efficient energy use while achieving similarly outcome environmental pollution.
- Energy efficiency increase leads to economic growth increase.

Environment



Economy



**Economy Constrained by social
and nature limits**

**Economy In Confluence with
nature and social constituents**

ICT Related Industry Initiatives

OECD (Organization For Economic Co-operation and Development) – Initiate ‘Green ICT’.

European Union Director 2002/95/EC Restriction of Hazardous Directive - on the reduction of hazardous substances

European Union Directive 2002/96/EC Waste Electrical and Electronic Equipment Directive – On waste electric and electronic equipment required the substitution of heavy metals and flame retardants like polybrominated diphenyl ethers

CSCI (Climate Savers Computing Initiative) – On reduction of electrical power consumption of PC

WWF (World Wildlife Fund) – launch climate savers program

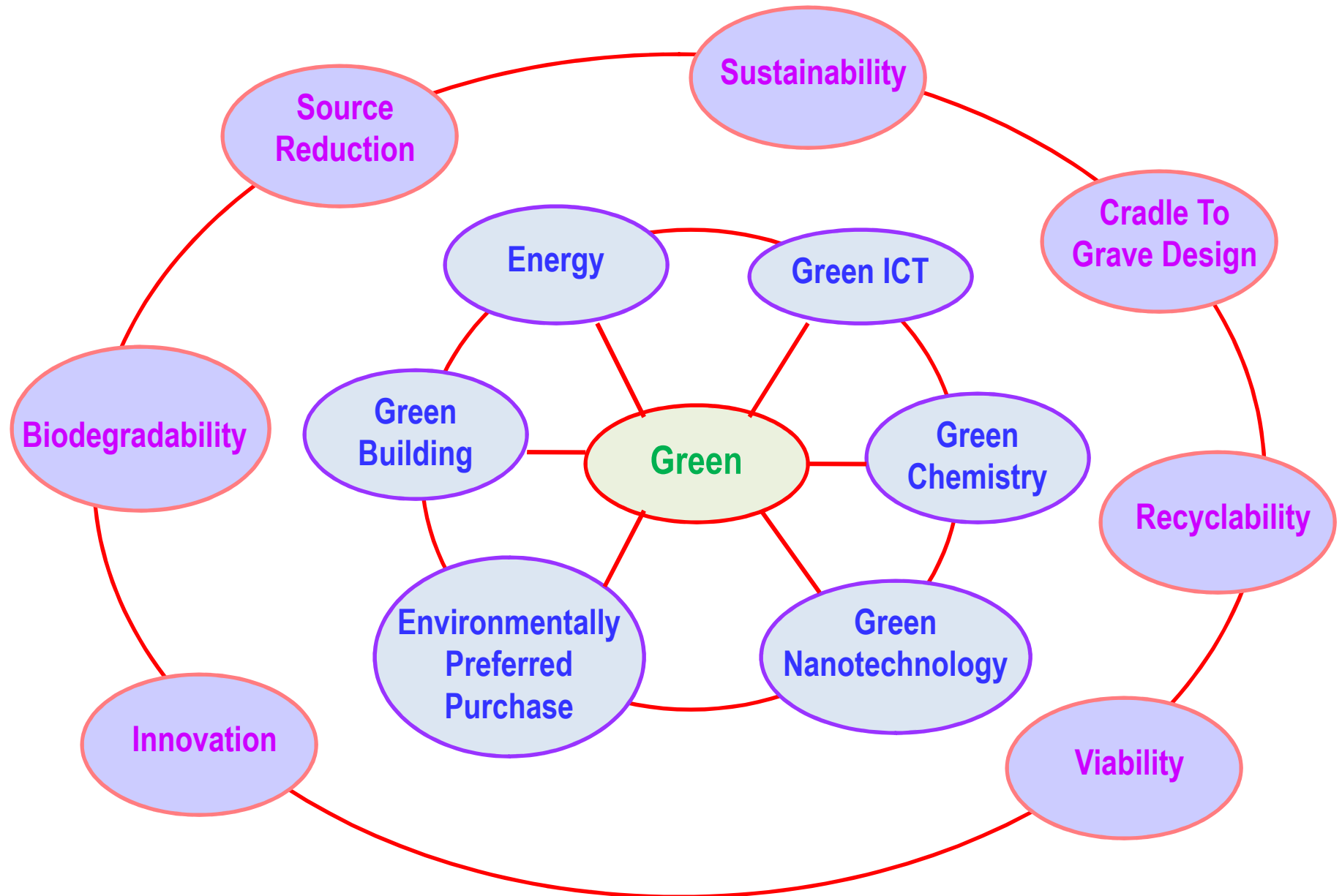
Green Electronic Council – offer Electronic Product Environmental Assessment Tool to assist the purchase of green computing system

Green Grid – Global Consortium (e.g. AMD AIK, Dell, HP, IBM, Intel, Microsoft Rackabl Systems, Spray Cool, Sun Microsystem and VM Ware) to advance energy efficiency in data centers and business computing ecosystem

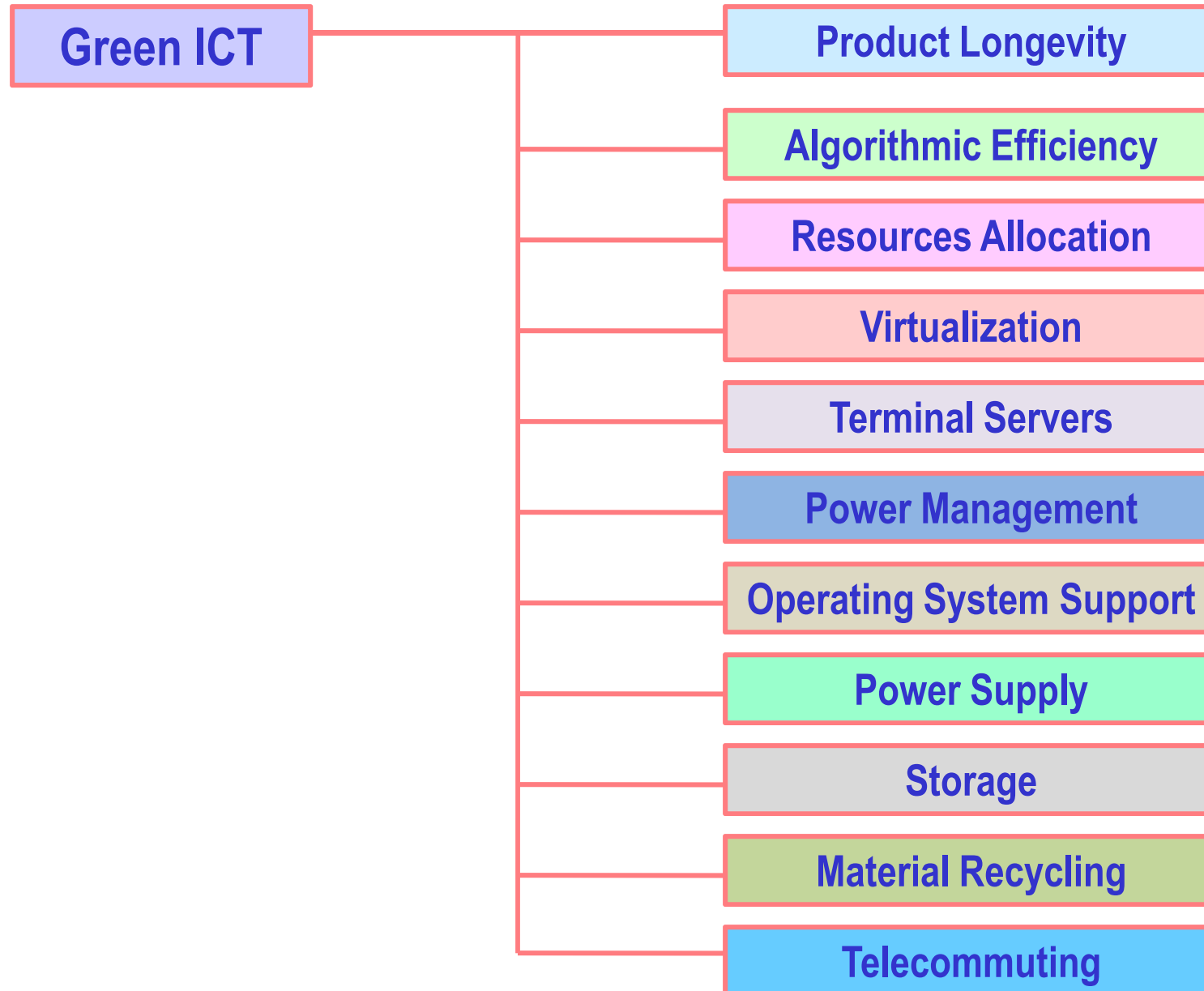
Green 500 – list rates supercomputers by energy efficiency encouraging focus on efficiency rather than absolute performance

Green Comm Challenge – promotes development of energy conservation technology and practices in the ICT field

Solution For Green Technology

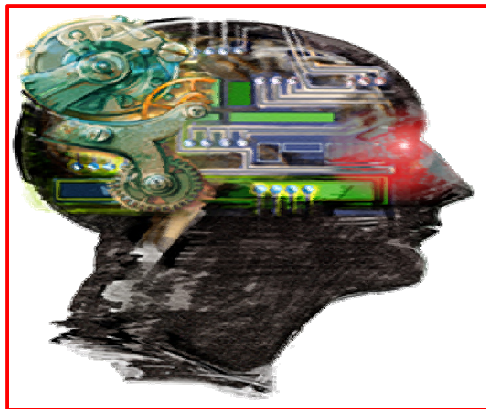


Approach Of Green ICT

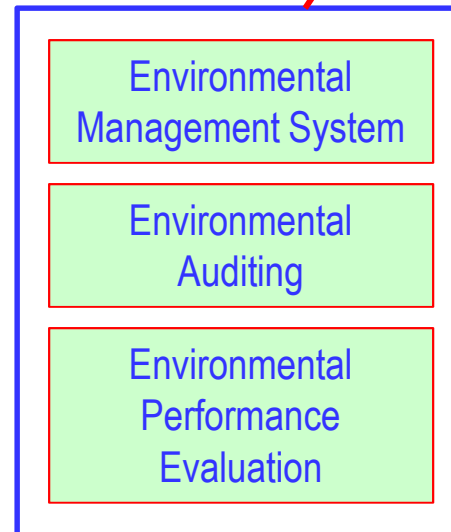


Case Example I

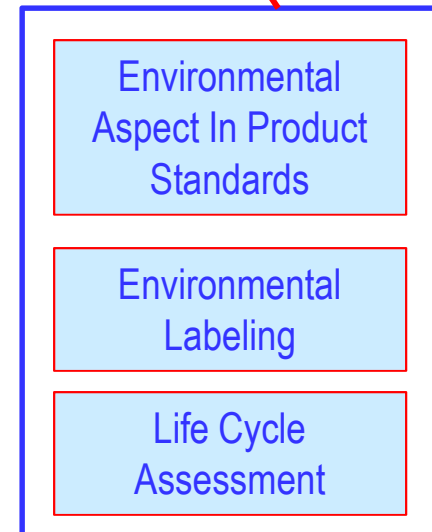
Development of isointelligence with the MGS support as Tool for Green Industry



isointelligence using Artificial Intelligence technology to promote ISO14000 Implementation in industrialization in accordance to ISO14000 standards



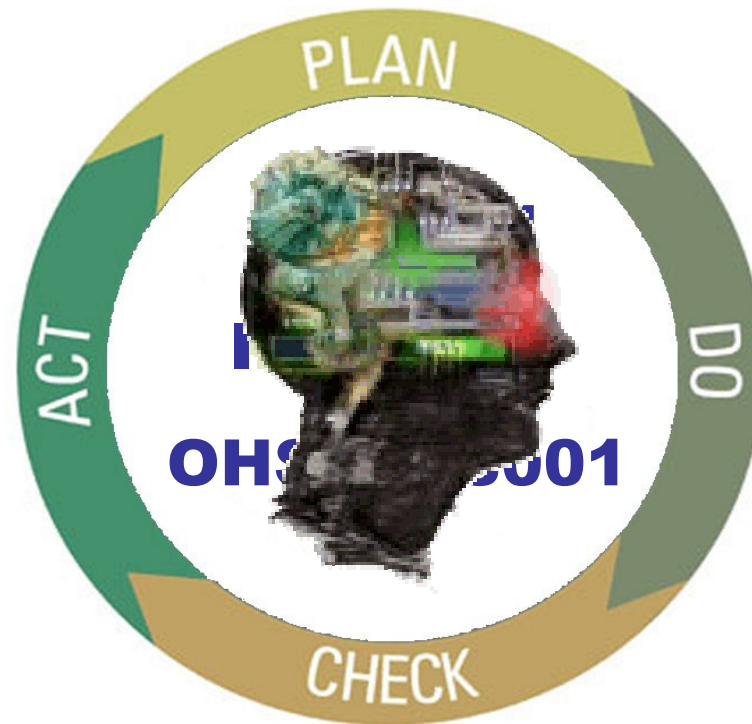
Organization Evaluation



Product Evaluation

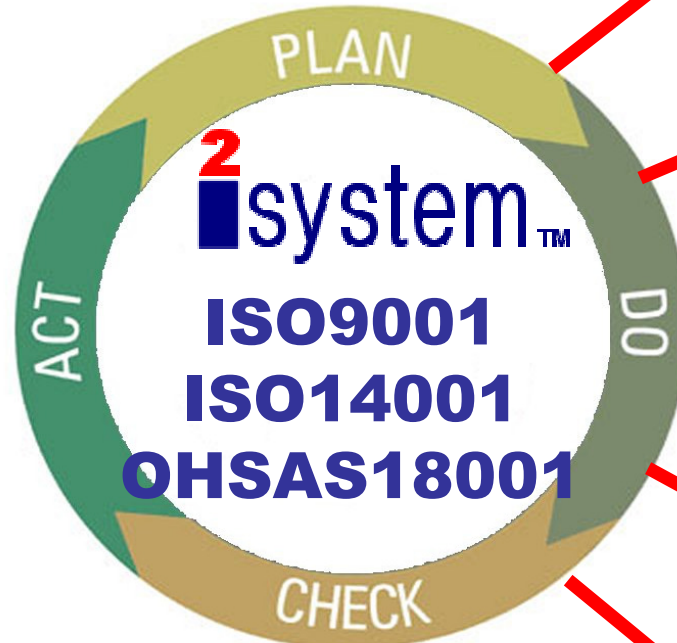
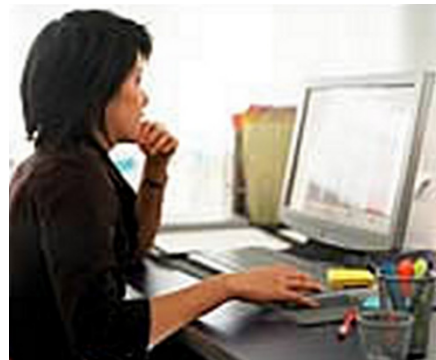
Tomorrow Management System

2system™



Modern Era of Management System Implementation
supported by **Cognitive Intelligence**

Application of



PDCA (Business Process Management)



Documentation



Library



Information & Mapping Integration



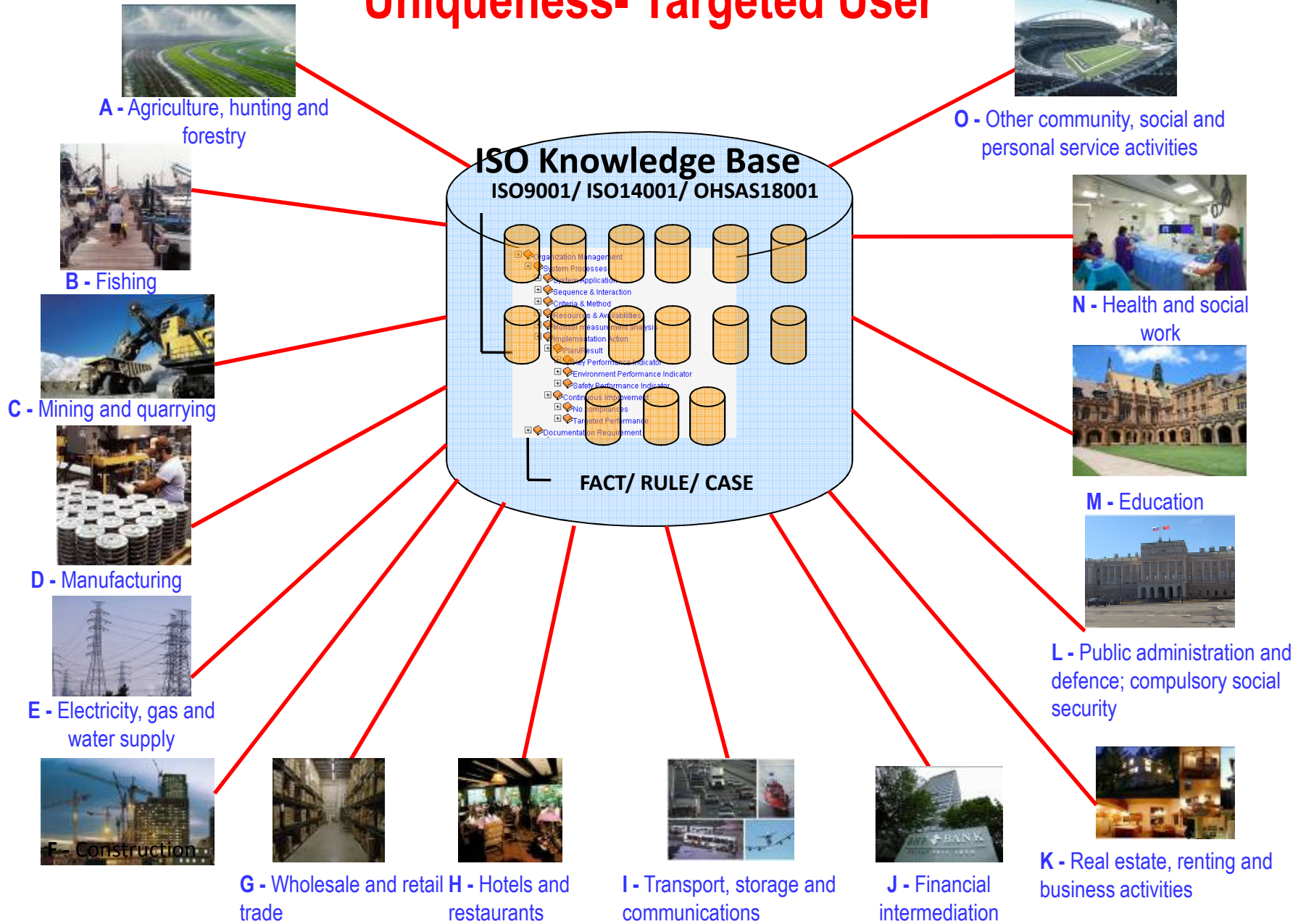
GIS Mapping and Navigation Configuration

Web based Cognitive Intelligence Support



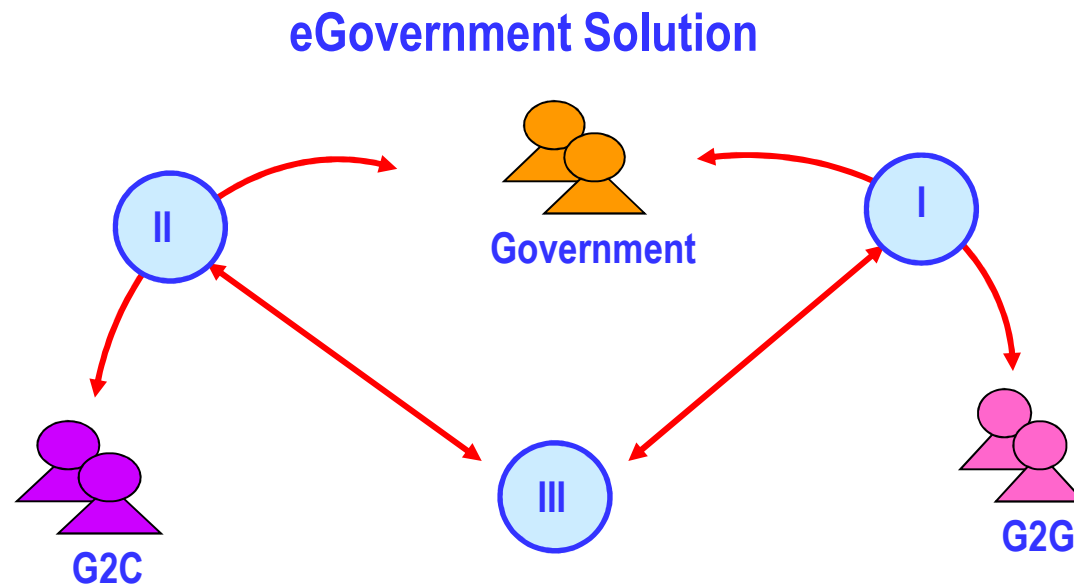
www.isointelligence.com

Uniqueness- Targeted User



Case Example II

Green Integrated Approach via Technology Solution Provision



eLAMS

- 80% carbon emission via telecommuting
- 75% paperless via electronic submission
- 50% economic value via work efficiency and effectiveness

Thank You

The logo consists of a red checkmark symbol followed by the letters 'es' in a bold, blue, sans-serif font.

es Enviro Management Sdn. Bhd.