DOE NII Program Plan

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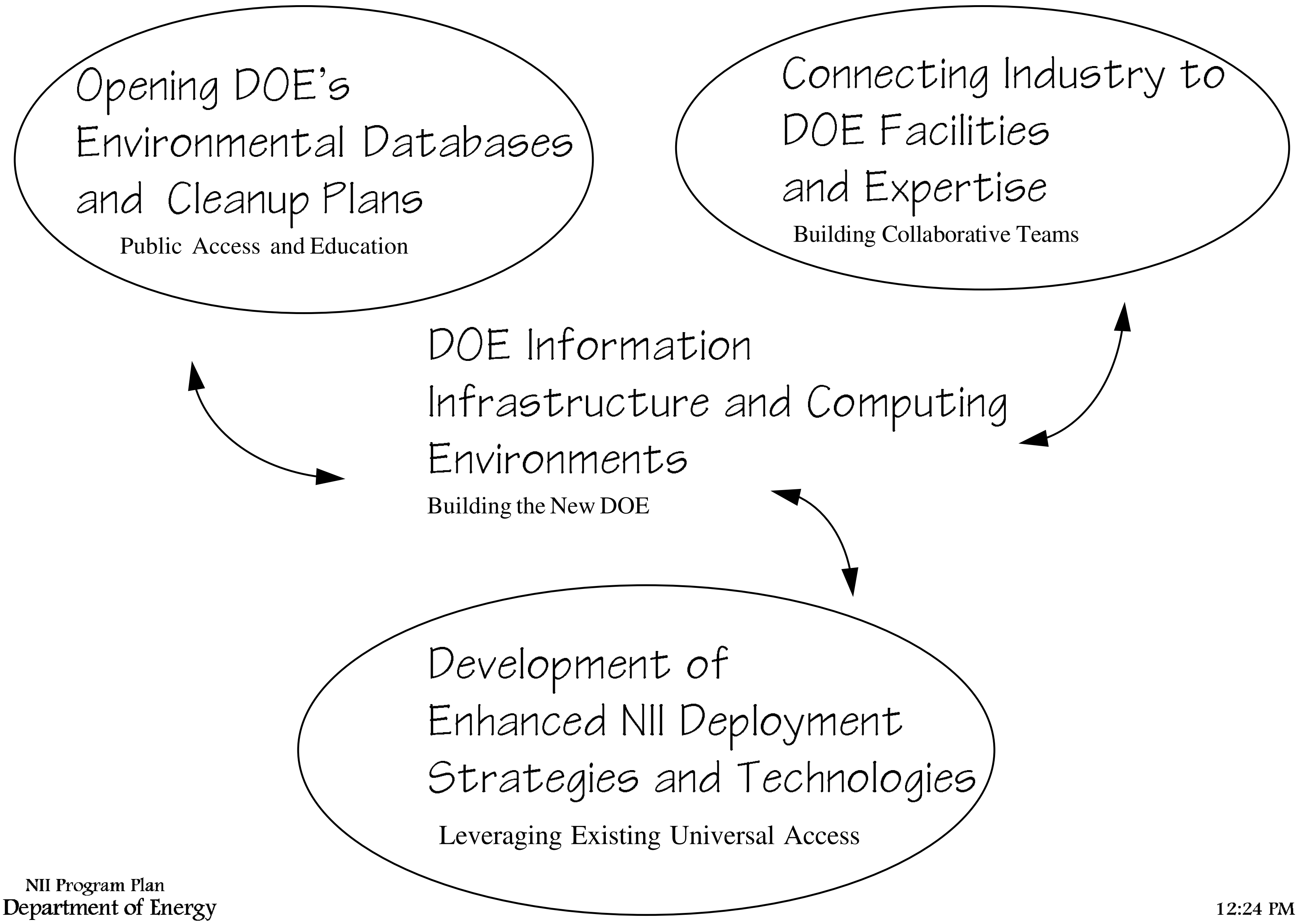
Goals

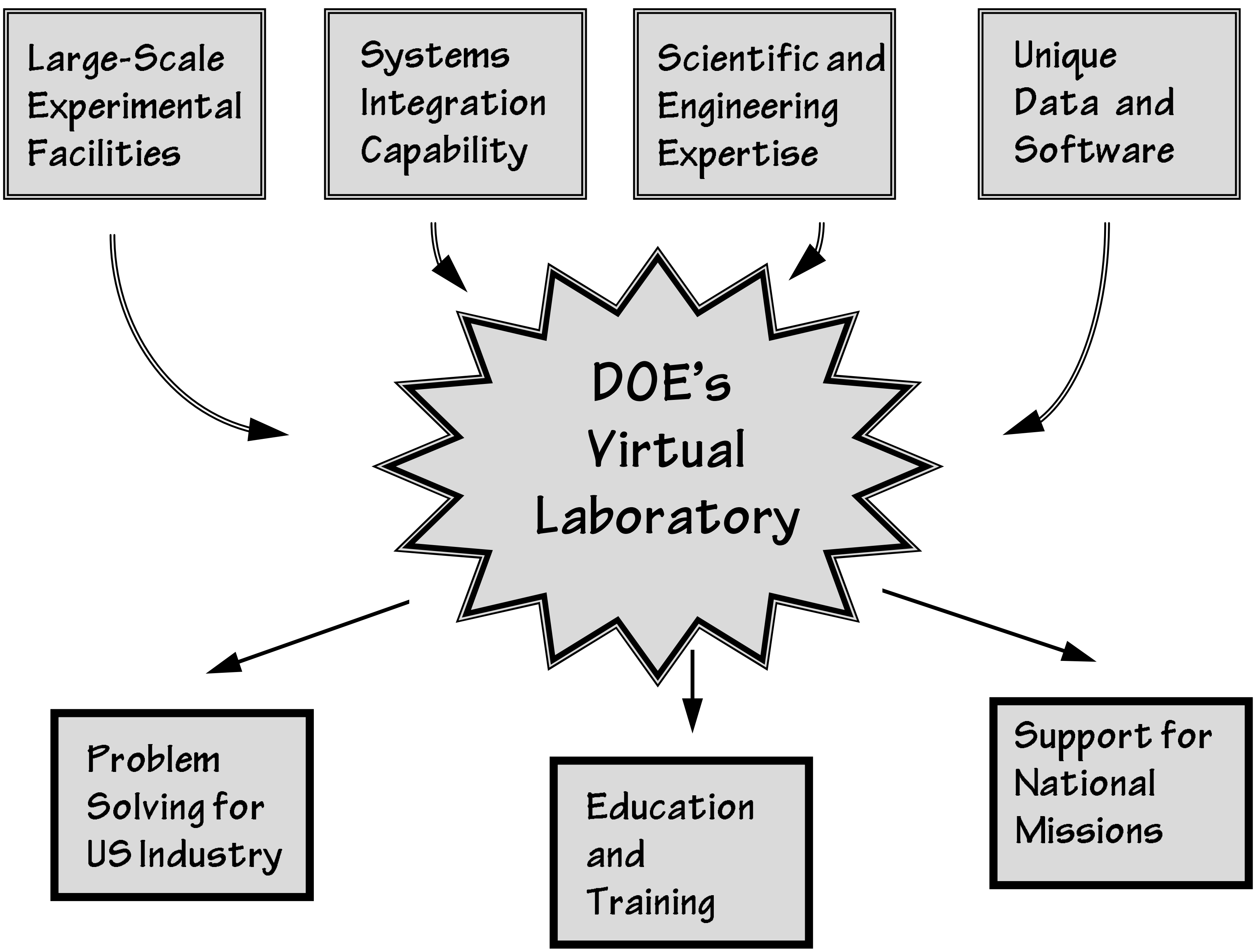
- Provide a ten year plan for DOE to embrace computing and information technologies as the key integrating factor in all of its activities (e.g. scientific, administrative, policy and planning)
- Provide the key means for DOE to be a model agency for openness and information transparency
- Provide a state-of-the-art information technology environment for DOE's scientific and technical programs

Department of Energy's National Information Infrastructure Program

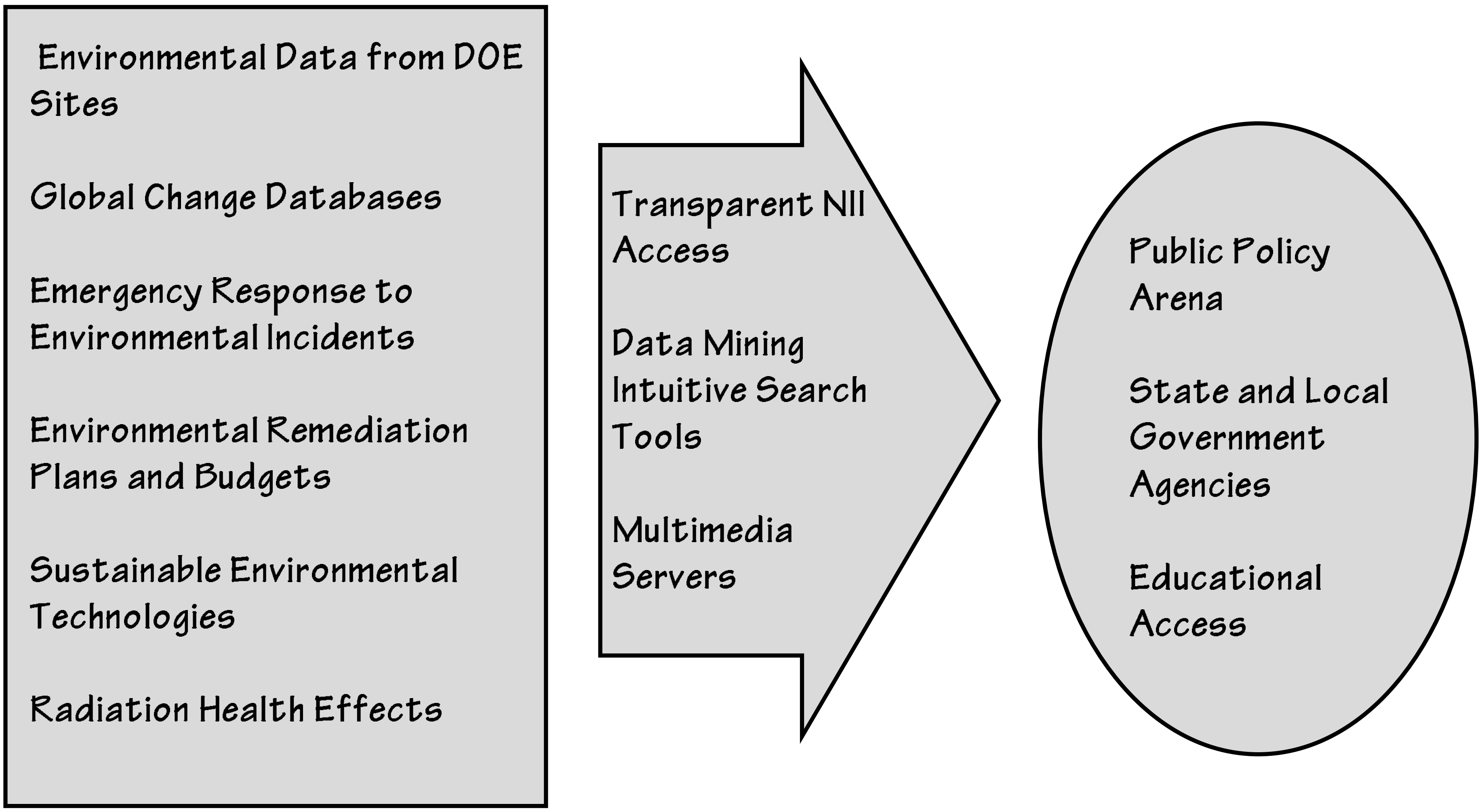
- Develop ways to improve remote access and utilization of DOE experimental facilities
- Open environmental databases and cleanup processes
- Collaborate with electric utilities to develop enhanced strategies for building the national information network
- Design and build information systems to support the national transition to sustainable development
- Bring DOE's simulation and modeling capability to a broad set of national customers

The DOE NII Program: Three Initial Thrust Areas

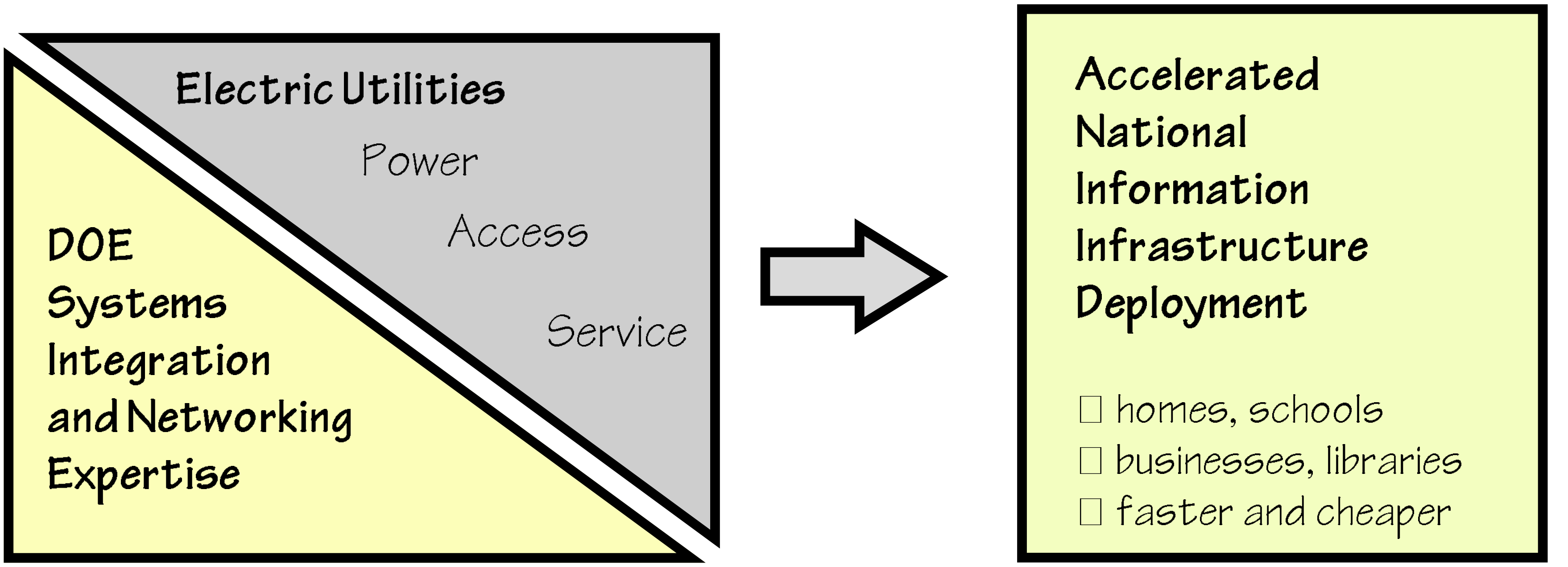



Large-Scale Experimental Facilities
Systems Integration Capability
Scientific and Engineering Expertise
Unique Data and Software
DOE's Virtual Laboratory
Problem Solving for US Industry
Education and Training
Support for National Missions

Opening DOE's Health and Environmental Databases and Plans



Development of Enhanced NII Deployment Strategies



Combining the utilities universal access, right of ways, and powered points of presence with DOE large-scale systems integration expertise to accelerate the deployment of the National Information Infrastructure.

Research Areas in Support of Pilot Projects

DOE NII Program Ideal FY96 Start

Collaborative Environments	$ 20M
Information Surety	$ 5M
Data Mining and Navigation	$ 10M
New Networking Technologies	$ 10M
Applications Environments	$ 5M
Total	$ 50M

Collaborative Environments

Goal: Transform the scientific, administrative and policy-making infrastructure and culture at DOE

- Computer mediated collaborative work environments
- Distributed virtual environments
- Remote operation, participation and monitoring technology
- Multimedia servers and database technology
- Pilot projects for remote access and operation

Information Surety

Goal: To ensure appropriate, efficient access to open, private, proprietary, export-controlled, and classified data and software

- Development of new mechanisms for insuring privacy
- Providing secure communications via public networks
- Protecting trade secrets and protected codes

Data Management, Mining and Navigation

Goal: To provide new tools for access and analysis of distributed data and information resources

- Mechanisms for supporting federated databases
- Advanced indexing and searching technology
- Semantic and syntactic translation and annotation
- Pilot project for environmental databases

Advanced Networking Technologies

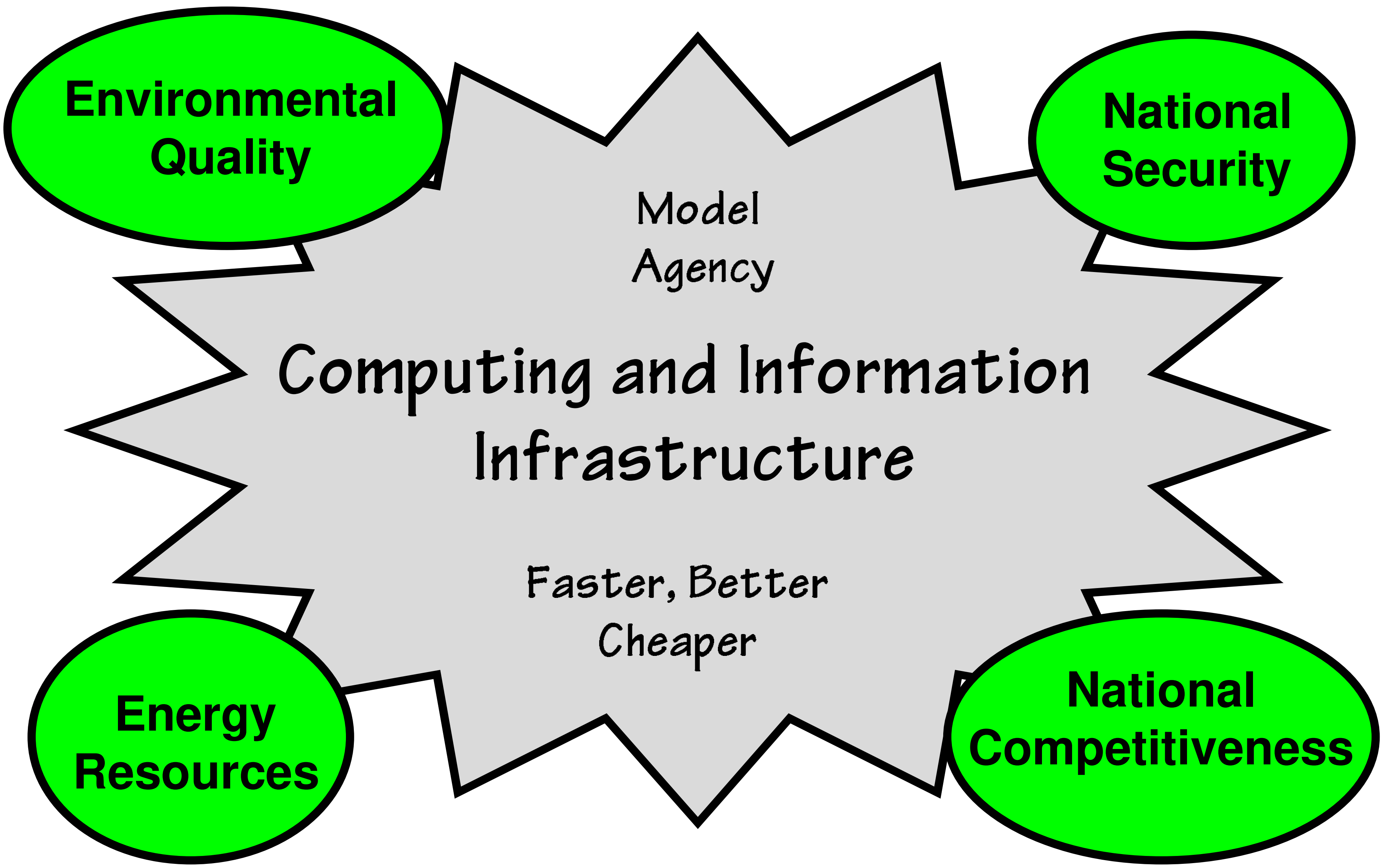
Goal: To explore new and alternative networking paradigms and technologies

- Scalable routing and network management
- Technologies for alternative NII deployment
- Protocols for supporting new types of aggregated multimedia and instrumentation data
- Terabit network technologies
- Pilot project for alternative deployment

Distributed Applications Architecture

Goal: Provide a computing and information environment with the ability to address the most urgent, complex and important problems facing the nation

- Distributed computing tools and environments
- Latency management techniques and algorithms
- Object-oriented applications templates


Environmental Quality
National Security
Model Agency
Computing and Information Infrastructure
Faster, Better Cheaper
Energy Resources
National Competitiveness