

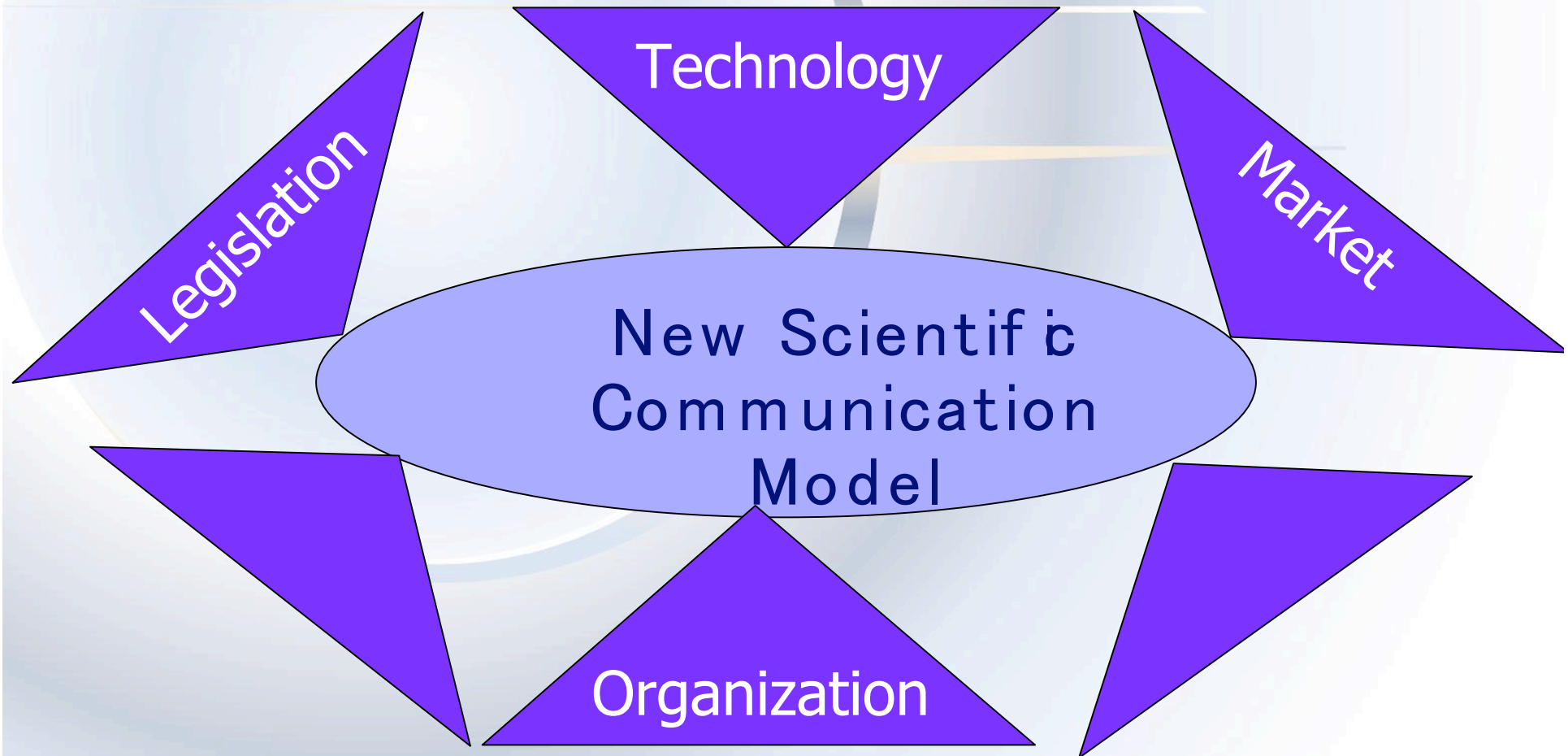
# **e-Infrastructures:**

## **The New Scientific Communication Model from a Technological Perspective**

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# Perspectives



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# New scientific communication model

- Not only papers but also data
- Open access and sharing
- Cross-domain knowledge exploitation

# Not only papers ....

- Sensor data, experimental data, statistical data have no meaning for the scientists if they are not processed

# Technological requirements (1)

- Scientists must have access to the necessary computing and storage resources and to the software environment required to support the complex data processing

# Open Access & Sharing

- Self-archiving enables scientists and their organisations to publish research products and make them available to the scientific community
- An organization can share the results produced by its scientists under certain policies (sharing does not mean “accessible to everyone, under no conditions and forever”)

# Technological requirements (2)

- Organizations must have the necessary resources and the required technical skill to support self-archiving (storage, retrieval, access, curation and preservation) of complex and heterogeneous objects
- Mechanisms must be implemented to registry and to discover (be notified of) available archives and their access policies
- Sharing policies must be guaranteed

# Cross-domain knowledge exploitation

- Publishing is done within a context (e.g. naming, metadata formats, ontologies, thesauri, language)
- Contextual information is needed to interpret the accessed knowledge
- Cross-domain knowledge full exploitation requires transparent access
- Scientists exploit resources produced by others only if the quality of them and of the related services is ensured

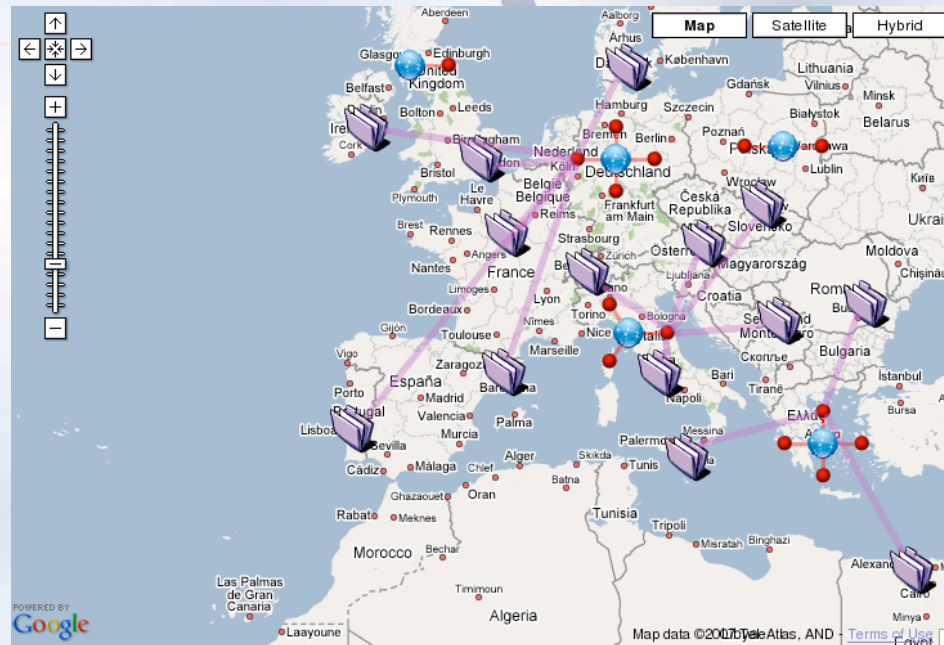
# Technological requirements (3)

- The implementation of transparent access necessarily require access to contextual resources (e.g. ontologies, thesauri, gazzeteers)
- Contextual resources must be shared, maintained, curated and preserved
- Quality of service (e.g. availability, scalability, performance) must be guaranteed

# My contribution to future strategy, policy and research:

“The new scientific communication model will never be sustainable without the introduction of an appropriate technological and organizational solution”

# (Open) European e-Infrastructure



Integrates shared resources and provides services for supporting the new research communication model

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# A step towards a European e-Infrastructure

- DRIVER– Digital Repository Infrastructure Vision  
for European Research

([www.driver-repository.eu](http://www.driver-repository.eu))

51 institutional repositories  
publicly accessible through  
the first DRIVER public release  
(June 2007)

# Another step towards a European e-Infrastructure

- DILIGENT – A Digital Library Infrastructure on Grid Enabled Technology

[www.diligentproject.org](http://www.diligentproject.org)

Supports publishing of multimedia material, environmental data and complex products

Exploits the computing and storage resources of EGEE



# My contribution to future strategy, policy and research:

“The new scientific communication model will never be sustainable without the introduction of an appropriate technological and organizational solution”

**Thank you**