



INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

The Digital Economy - R&D Perspective

“...from processing atoms to processing bits“

- Nicholas Negroponte-

The Roadmap towards Global Innovation

ITEA 2 Symposium 2009, Madrid , J. Bermejo



European leadership in Software-intensive Systems and Services. The Future of Embedded and Distributed Software.

Contents

The background of the main content area is a teal gradient with several seagulls in flight. A white dotted line forms a partial frame around the text.

ITEA Roadmap for Software- Intensive Systems and Services

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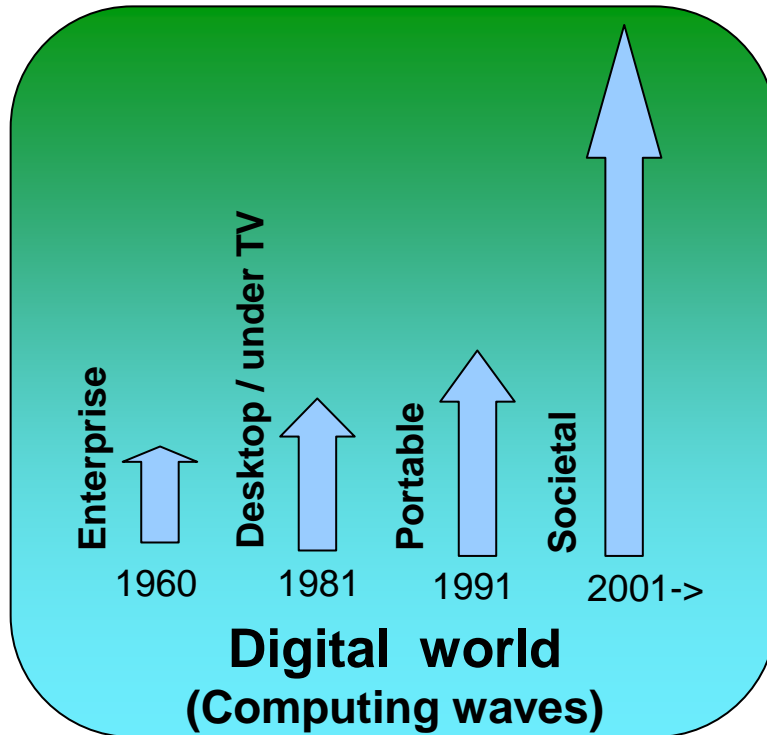
- **ITEA Roadmap and the innovation process**
- **Physical and digital world integration**
- **Modelling the problem to solve**
- **Approach**

ITEA Roadmap

The innovation process

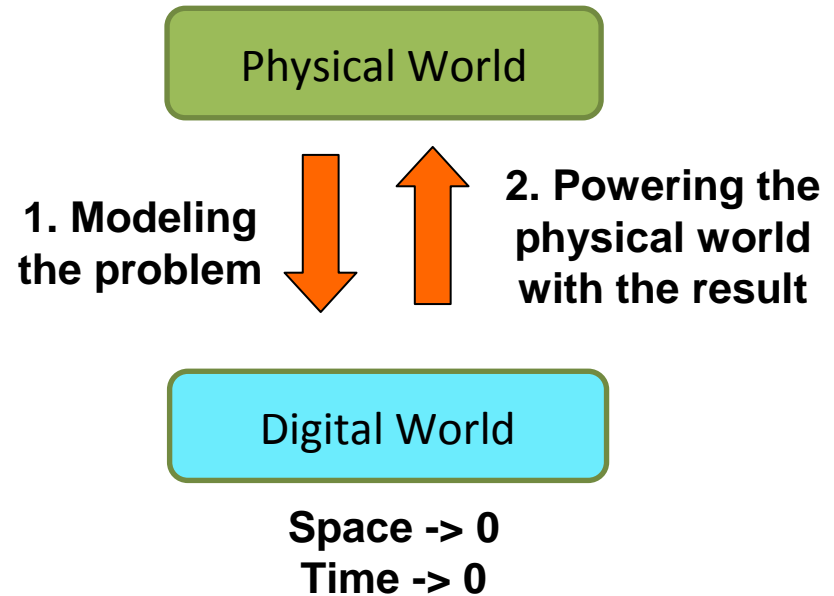


Physical world

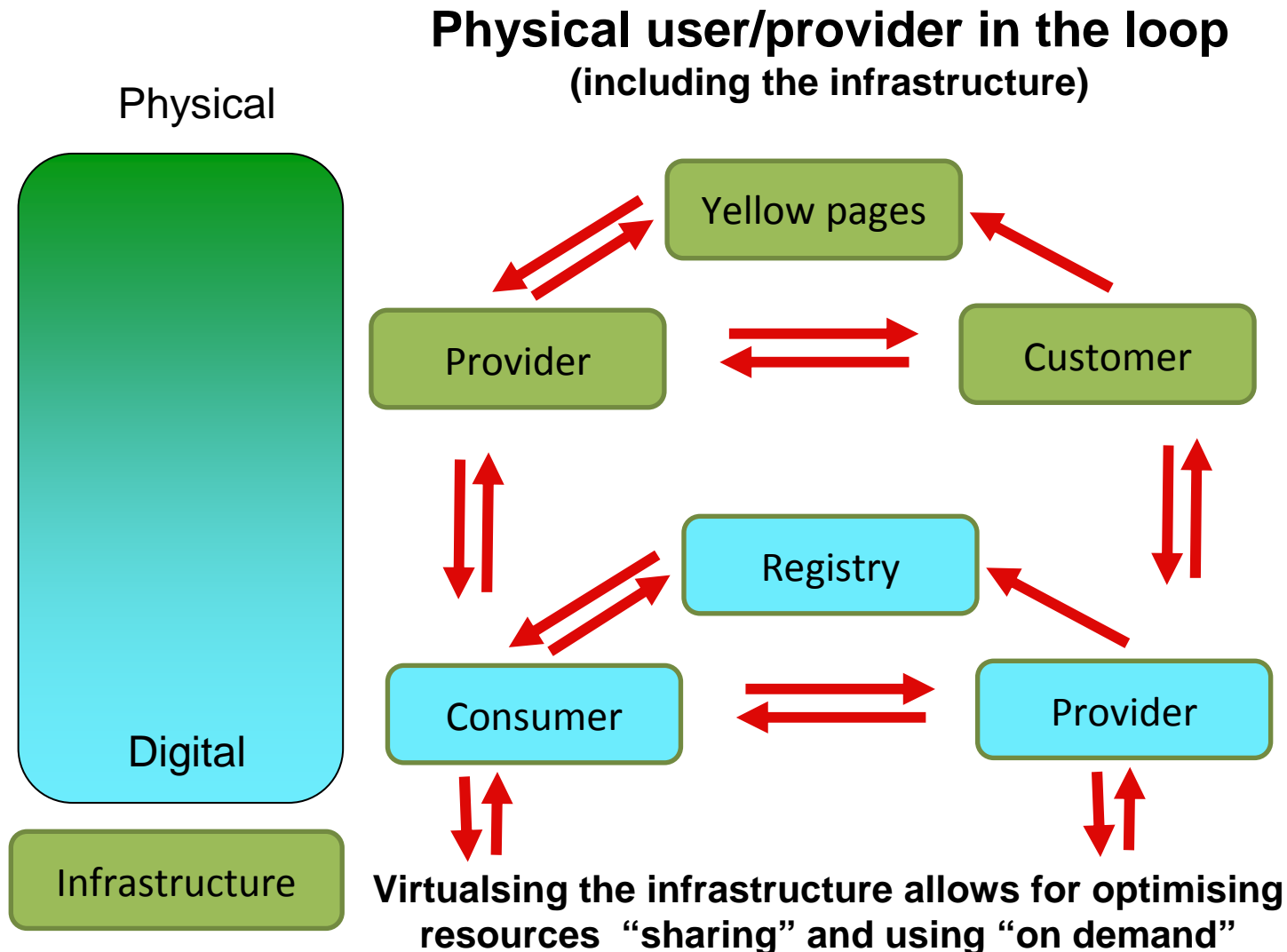


Infrastructure (enabler)
(Computing, Storage, Communication)

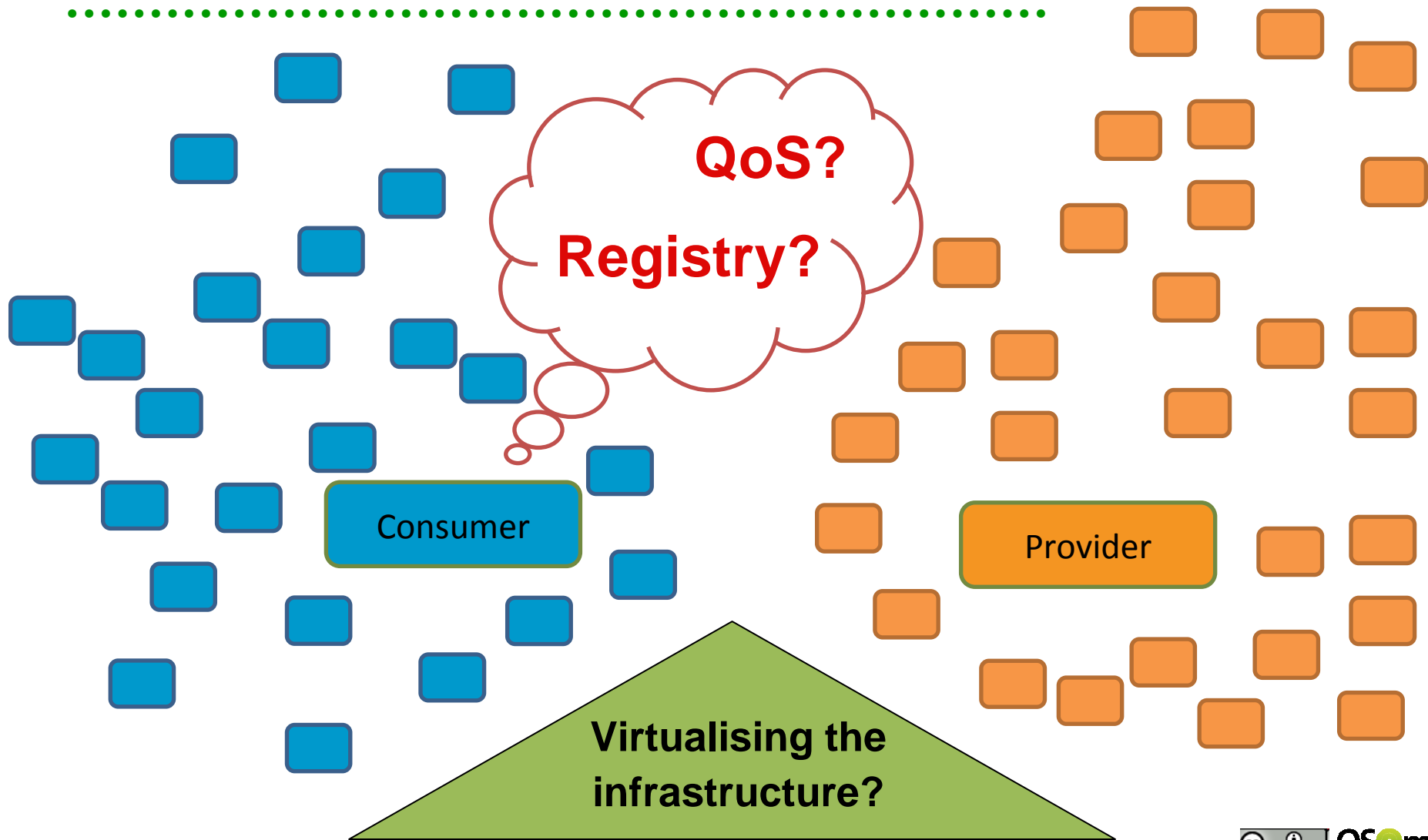
Innovation process across all markets



Physical & Digital world integration Service Systems: A common abstraction

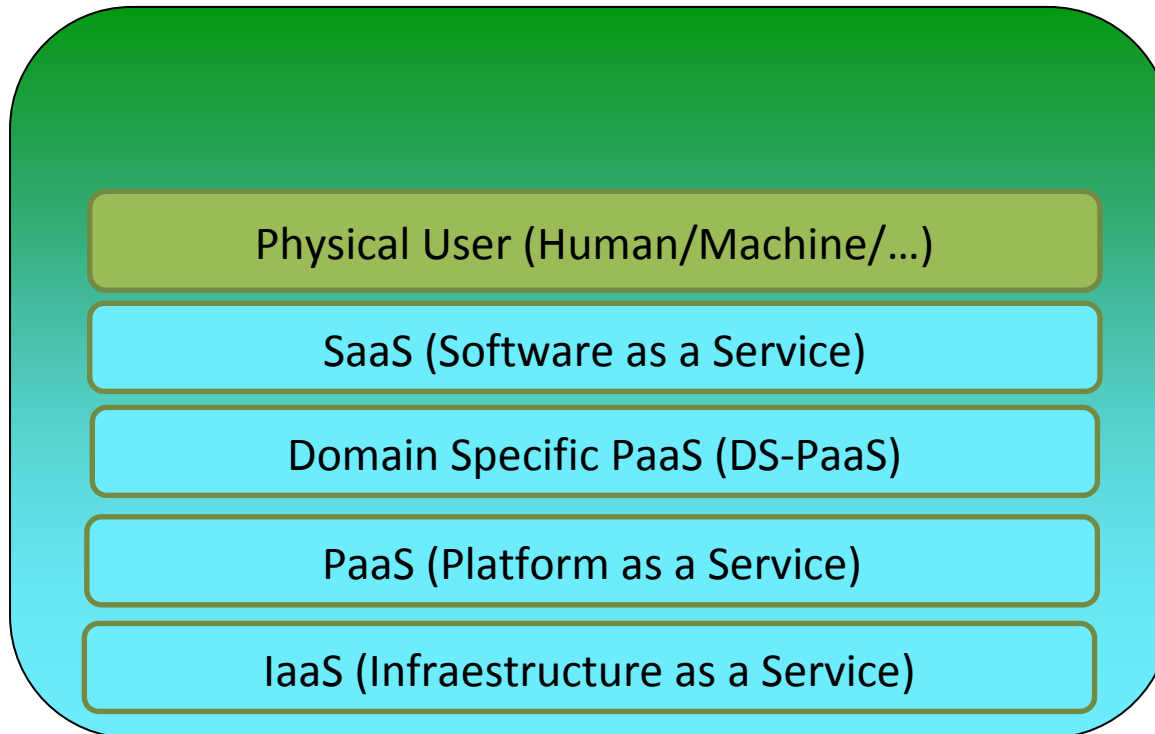


The technical challenges



Service layers approach

Physical world



Physical User (Human/Machine/...)

SaaS (Software as a Service)

Domain Specific PaaS (DS-PaaS)

PaaS (Platform as a Service)

IaaS (Infrastructure as a Service)

E.g.

Salesforce, Basecamp ...

Twilio. Virtual Devices (eg. Android, Chrome OS -PC?-, Youtube -TV?-)

Google App Engine ...

Amazon EC2, Gogrid ...

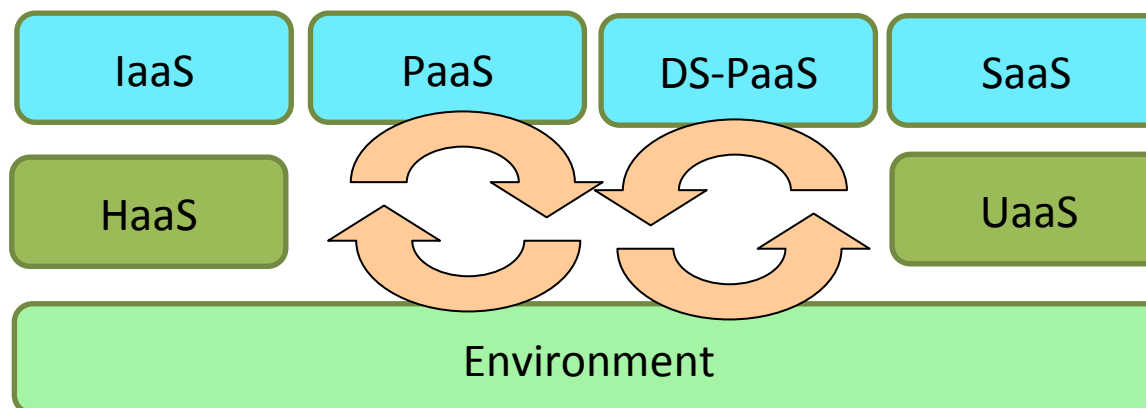
Digital world

Infrastructure (enabler)
(Computing, Storage, Communication)

**Infrastructure virtualisation >
Moving the OS to The Net**

Modelling the problem to solve

System View - A XaaS world without physical boundaries Global service chains



- Run-time innovation cycle
- New scenario embedding the physical world
- Software governed society (Aml)

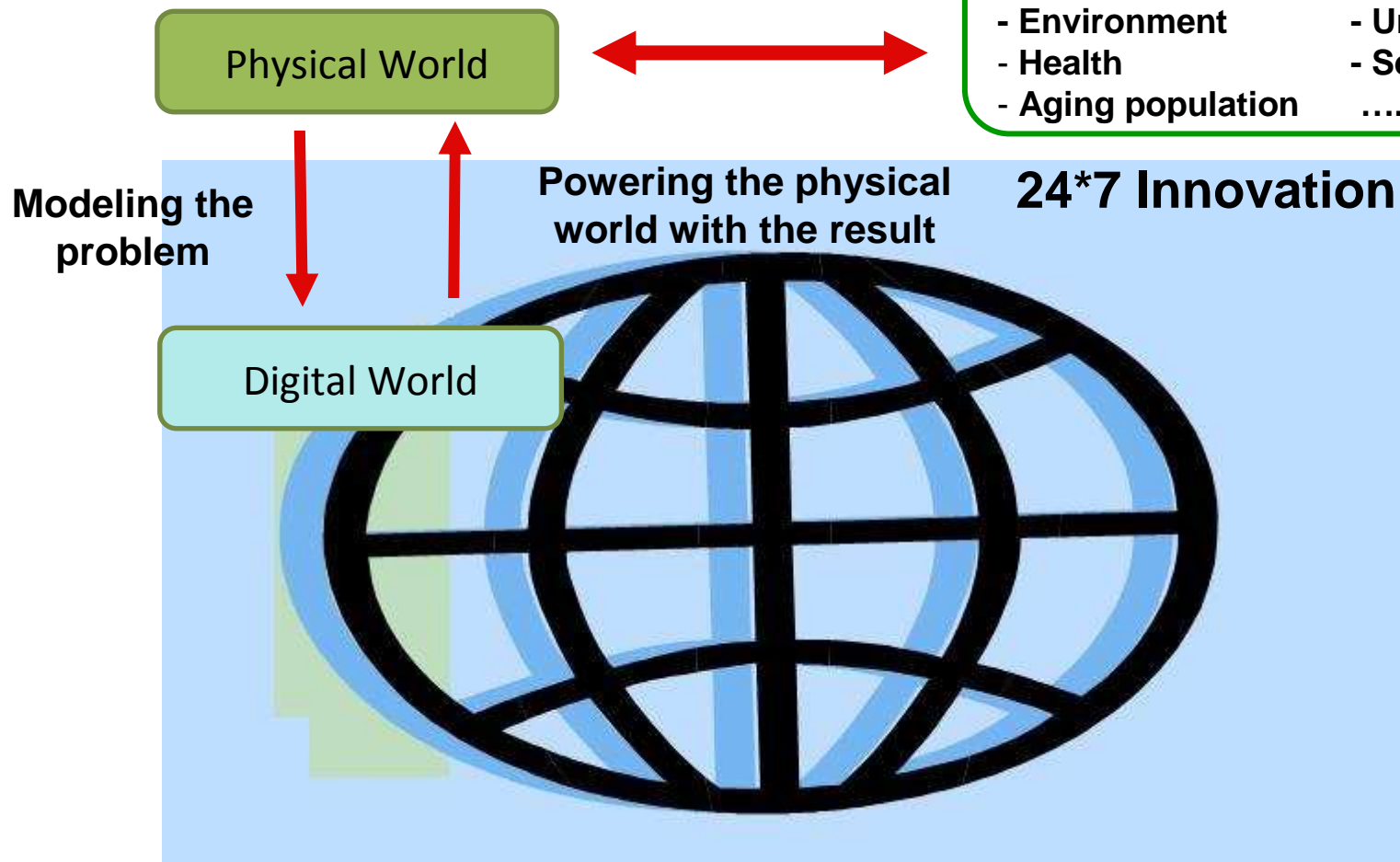
Open Services R&D and policy is needed for allowing the sustainable development of the whole system

PaaS as a Means (PaaSaaS) vs Target

**Focus on society needs
Innovation at Internet speed**

Major Social & Economic impact :

- Knowledge
- Education
- Environment
- Health
- Aging population
- On the move
- Globalization
- Urbanization
- Security & safety
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ITEA 2

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Thank you for your attention



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