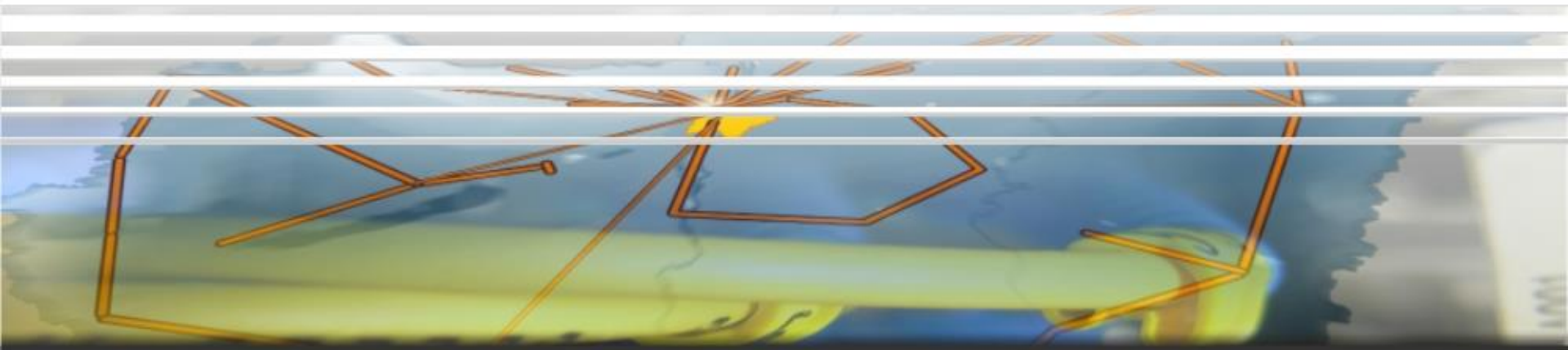


# The science-eInfrastructure-eScience triangle: from common thinking to common financing



**Lajos Balint, NIIFI/Hungarnet**  
<lajos.balint@niif.hu>



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# Background

- 25 years of eInfrastructure development
- Networks + added facilities = complex service portfolio
- Double role of eInfrastructures: **support + stimulation**
- Distributed scientific activities: VRE / VRC / VRS
- Multidisciplinary and interdisciplinary research activities / results
- Hidden relations/features ... another dimension of explorations
- eScience as a newborn member of the family of sciences

# Some key questions

- What is eScience? (vs. complexity, data, disciplines, services ...)
- Relation to science? (**servant or master?**) (**tool or controller?**)
- Relation to eInfrastructures? (I/O, store, transfer, process)
- Why a special treatment? (dislike Science?) (different model?)
- How to handle it? (separate vs. integrated handling ...)
- How to exploit it? (indirect / methodological vs. direct / practical)
- What follows next? (design automation ... research automation?)

# Issues to solve

- eScience/data research centres: not a final solution
- eScience separated from Science: not a promising structure
- eScience separated from eInfrastructures: risk of alienisation
- Complete coverage of all disciplines is a goal
- **Integration of eScience into the ERA model is a must**
- Teaching 50 millions of (potential) eScientists is a challenge
- eScience should be **another enabler / motor of innovation**

# The symbiotic triangle

- No definite borders (indeed triangle? or cut of two sets?)
- No clear share of responsibilities
- Common thinking is unavoidable
- Common financing is indispensable
- Win-win for all three components granted
- **Capabilities multiply (not just add)**
- **Results improve exponentially (innovation?)**

# Why common thinking?

- Knowledge ecosystem needs sustainable ERA
- Sustainable ERA needs capable eScience
- Capable eScience needs integrated triangle
- Integrated triangle supposes convergence to eScience
- **Triangle partners should agree on strategy and actions**
- Strategy and actions wrt. tools and methods are not enough
- Common skill, expertise, wisdom, innovativeness are needed.

# Why common financing?

- Sustainable ERA supposes sustainable eScience (triangle!)
- **Key element of sustainability is financial stability**
- Traditional eInfrastructure model no more valid
- Central funding decreases, costs increase
- Free services gradually disappear (except reasonable demands)
- **Jointly agreed common solution requires common efforts**
- Common business model needs common contributing (inc.PPP)



# Perspectives

- Increasing common territory of Science+eInfrastructure+eScience
- Mutual benefits are gradually strengthening
- **Stability and sustainability of eScience (triangle) increases**
- PPP opportunities (industrial involvement) improves
- Enabling outcome of triangular collaboration grows (innovation!)
- Business model can be extended (who pays for what ...)
- Positive feedback induces avalanche in Science and innovation

**A promising future is foreseen –**

**– but our responsibility is exceptional!**

# eScience and NIIFI

- 28 years in research networking ... e-Infrastructures
- Covering all disciplines
- Supporting the entire academic and research community + ...
- **Consciously aiming at stimulating on top of supporting**
- Contribution to building the key (research) data infrastructures
- Listening to and watching the European and global efforts
- **Welcoming the idea of the European eScience Forum**