

Data, Computing and Network Research Infrastructures and Services in Armenia

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Outline



ASNET-AM

- Brief information
- Mission
- Vision



E-INFRASTRUCTURES

- Mission
- Vision
- Future



DIGITAL SERVICES

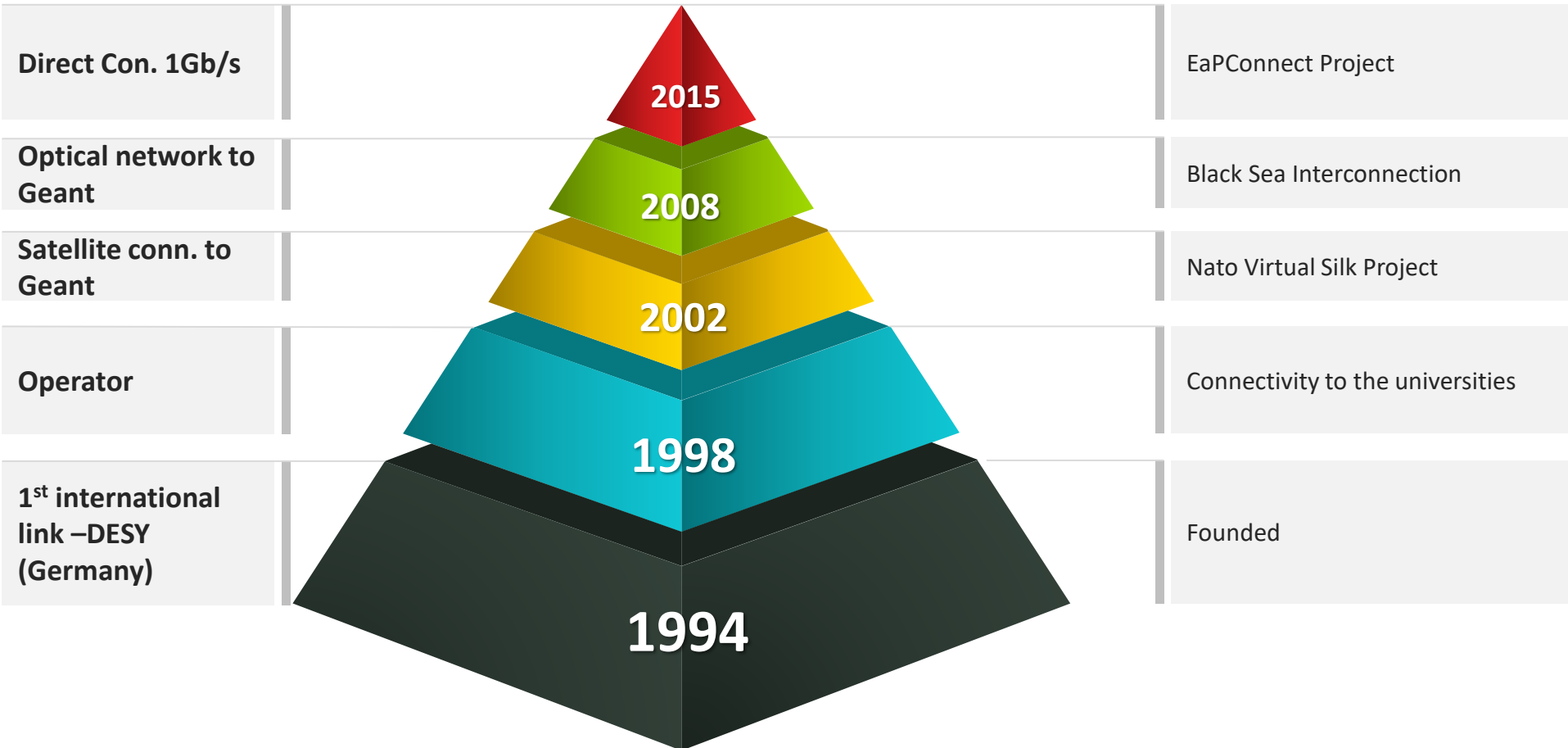
- Network
- Data
- Computing



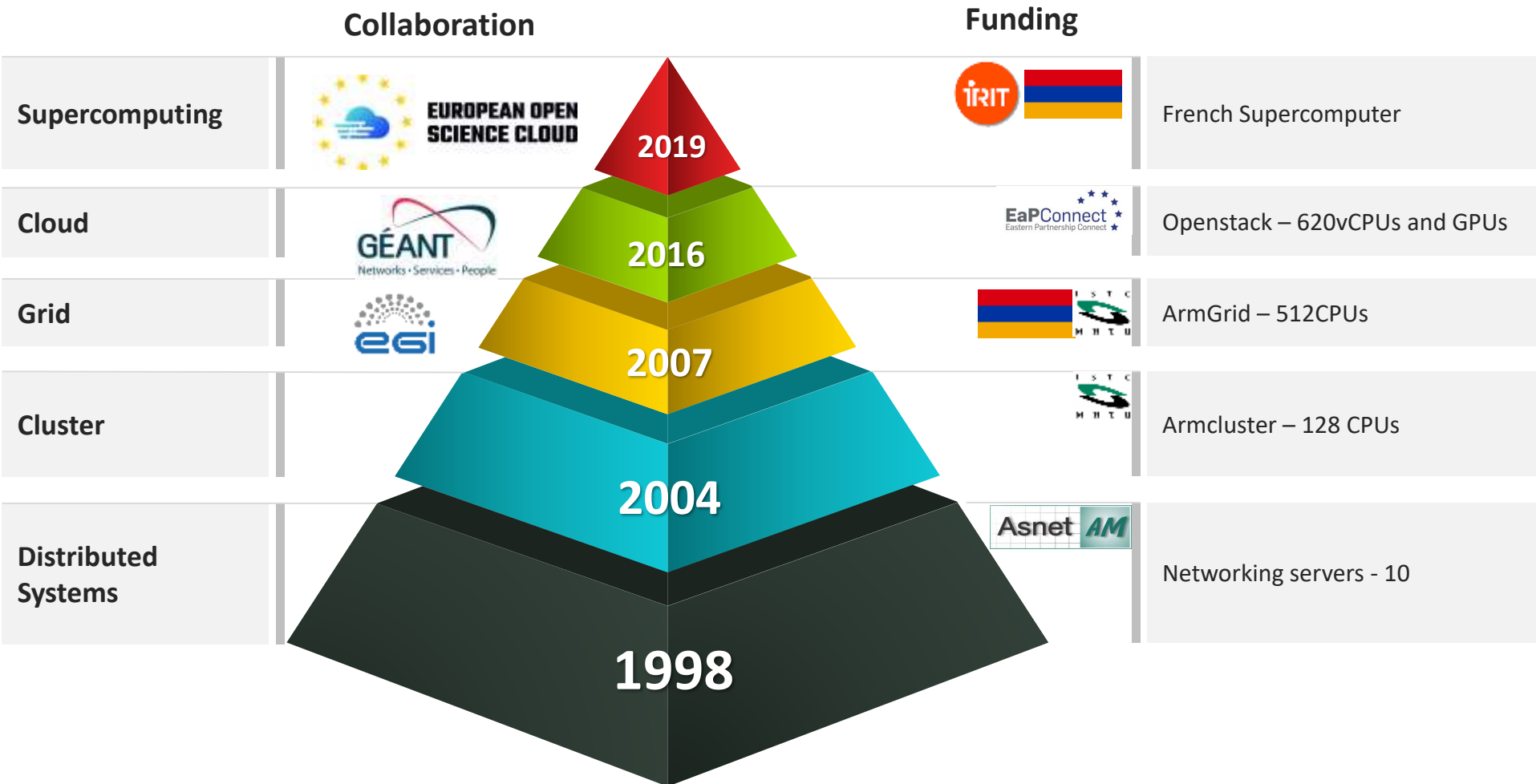
USE CASES

- Life Science
- Earth Science

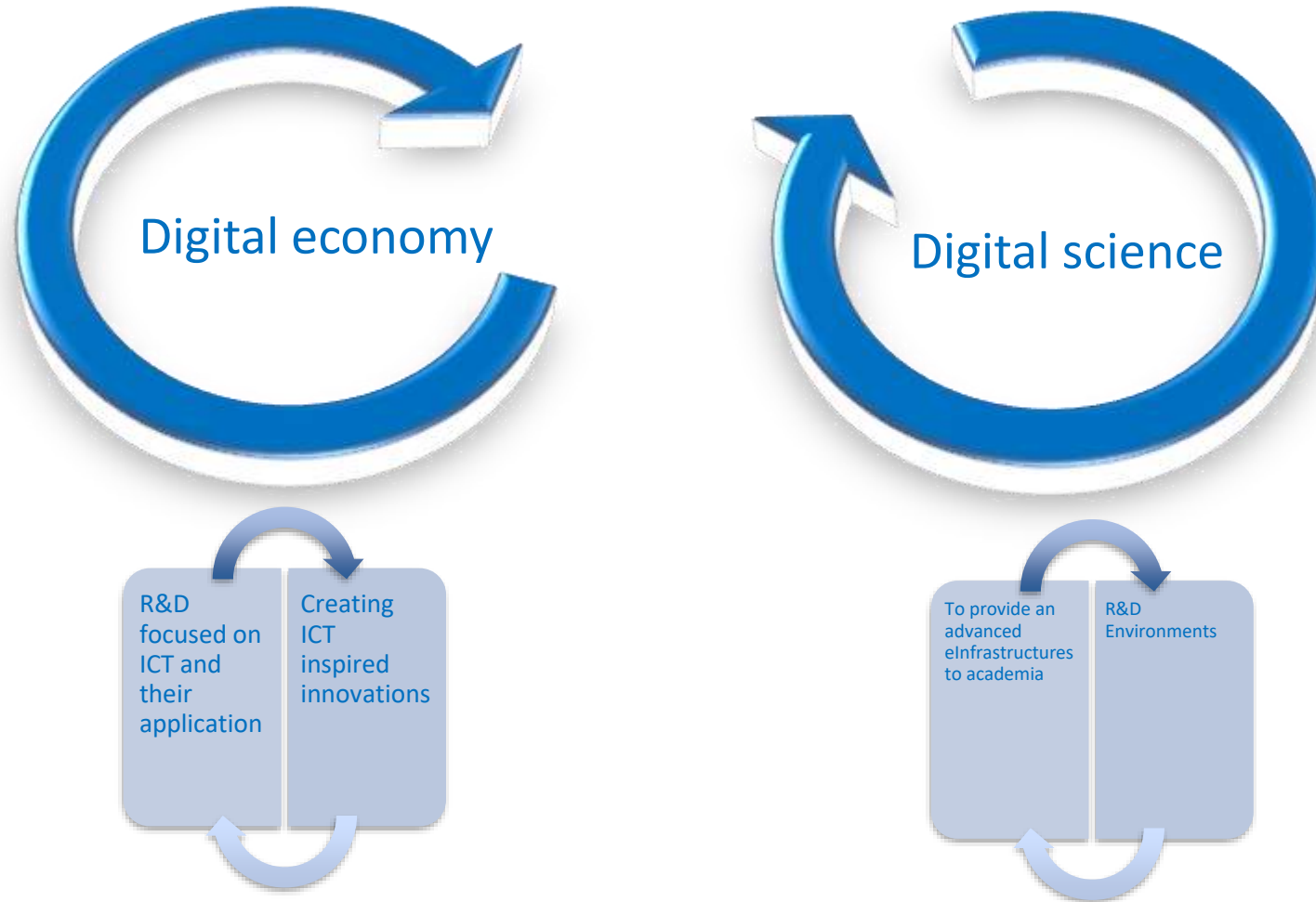
ASNET-AM – networking infrastructure



ASNET-AM Computational infrastructure



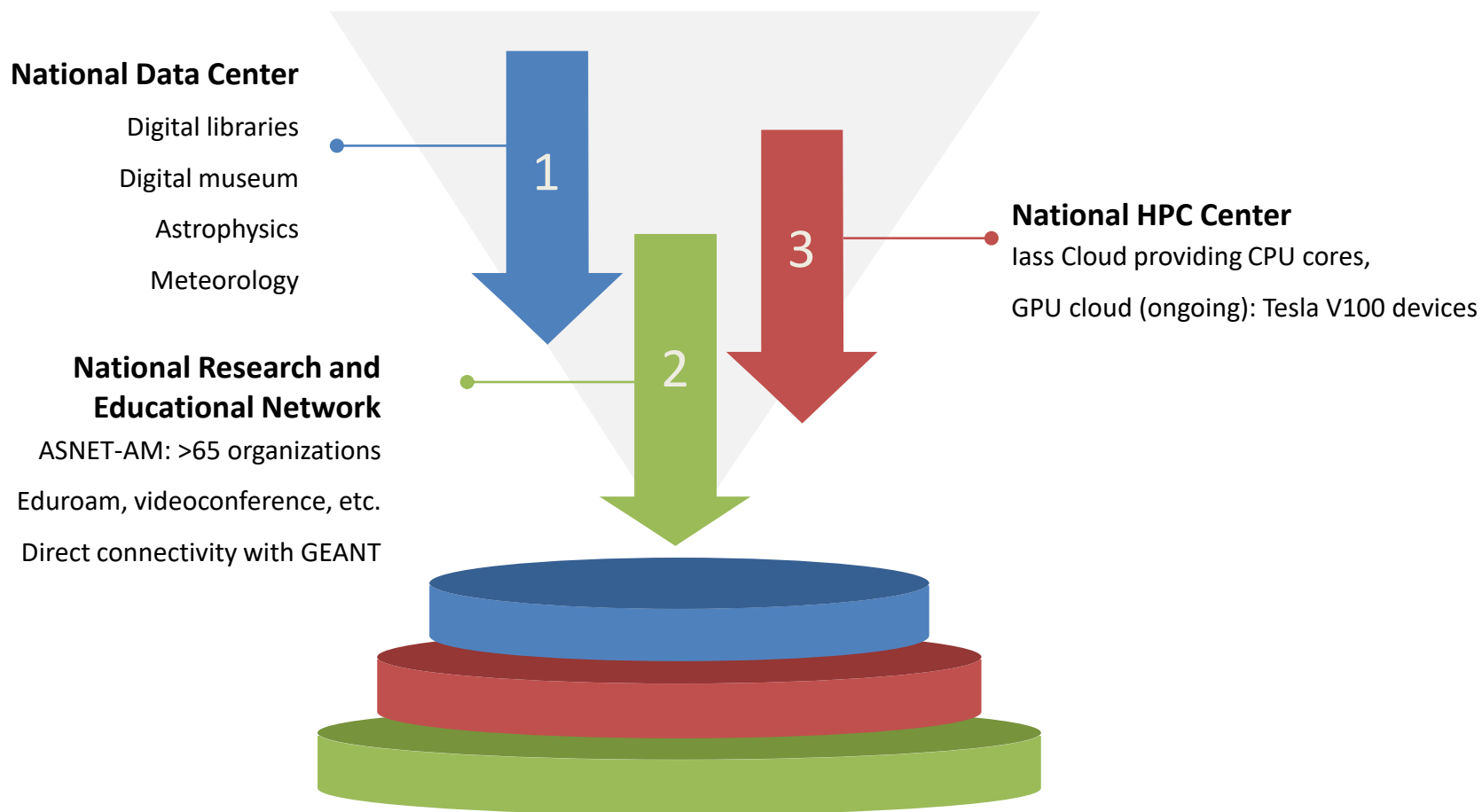
e-Infrastructure – mission



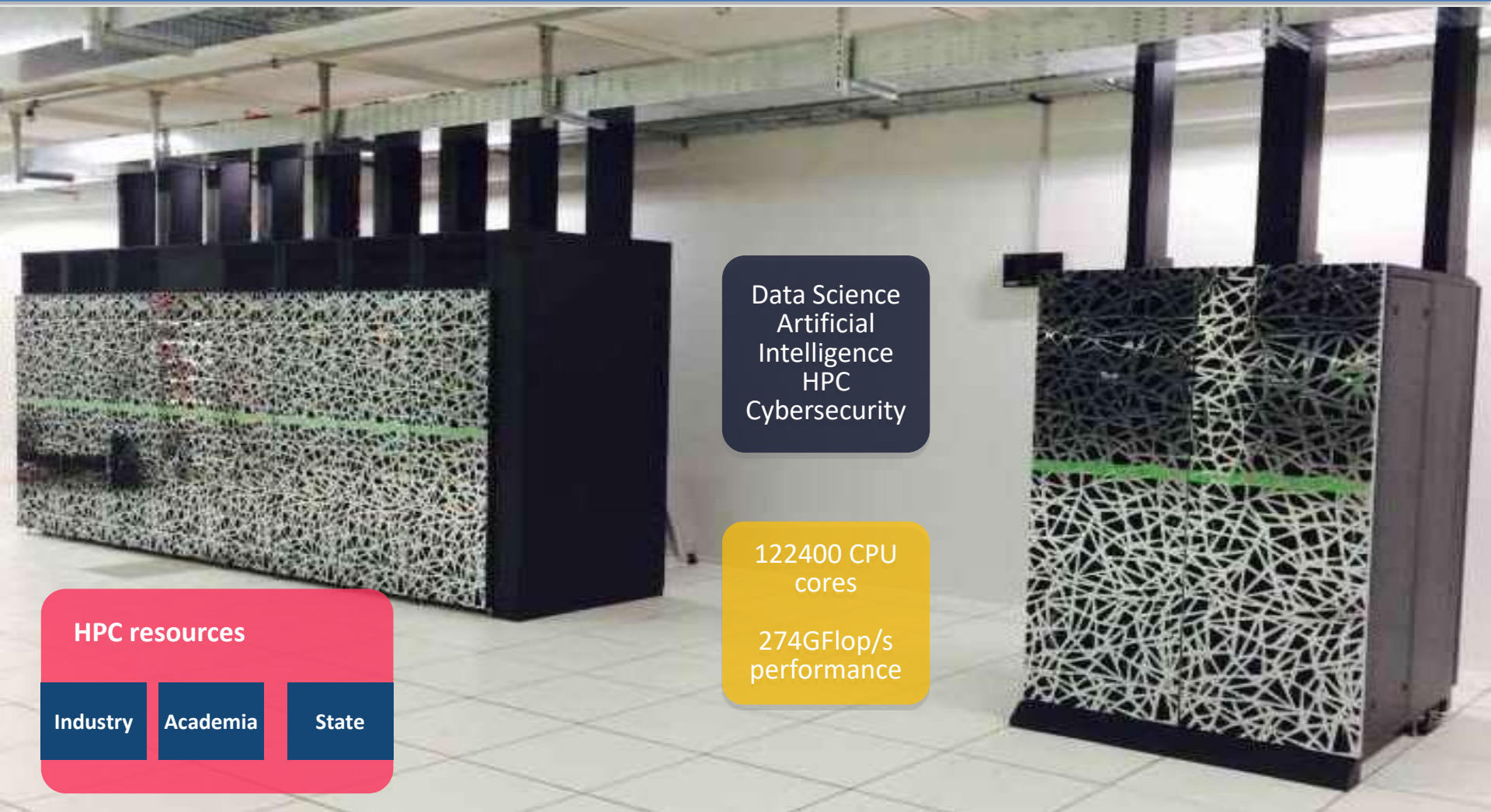
e-Infrastructure – vision



e-Infrastructure – at a glance



e-Infrastructure – future



Data Science
Artificial
Intelligence
HPC
Cybersecurity

122400 CPU
cores

274GFlop/s
performance

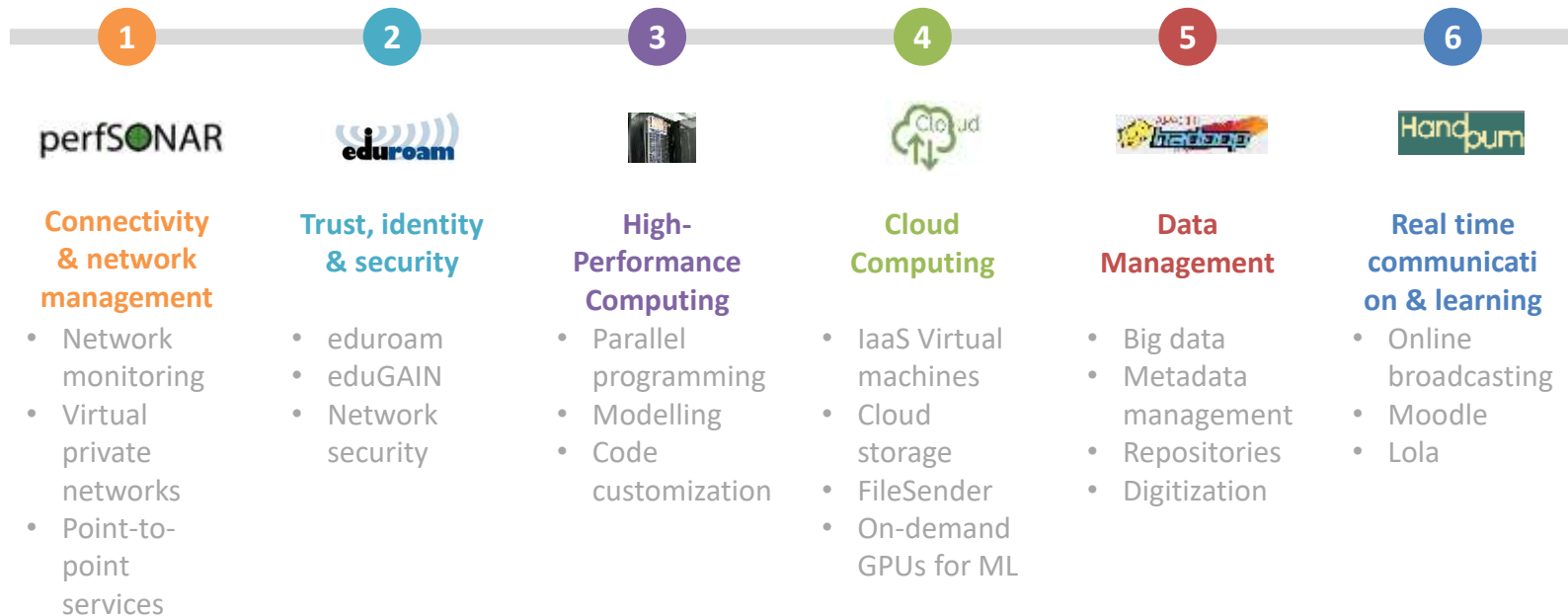
HPC resources

Industry

Academia

State

Digital services – overview

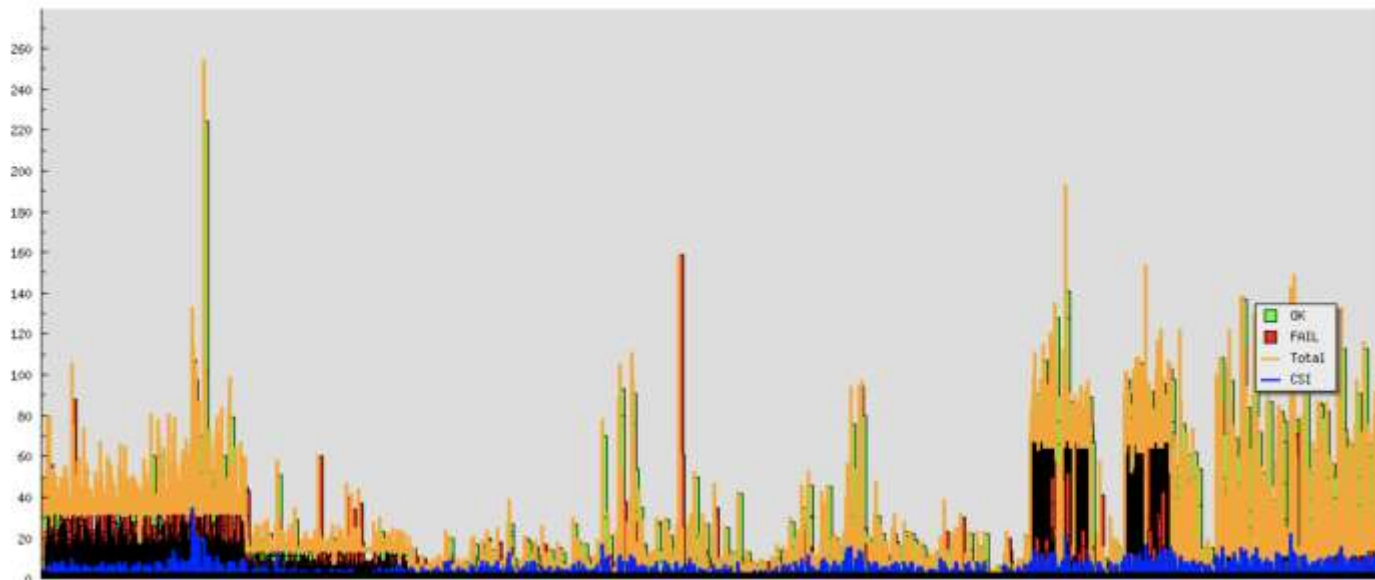


Digital services – networking

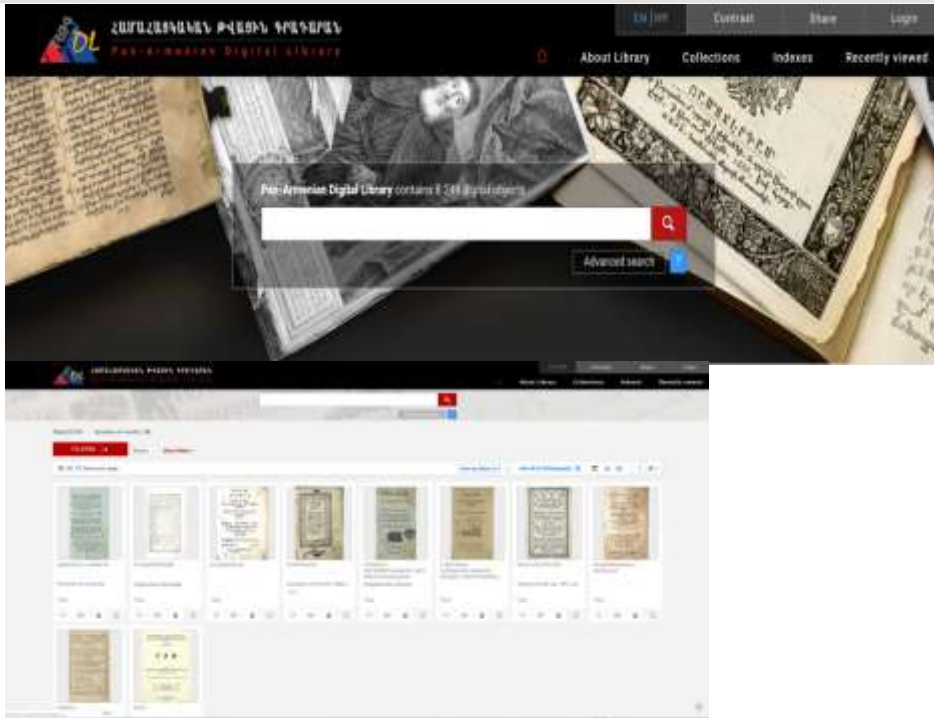
eduroam (education roaming) is the secure, world-wide roaming access service developed for the international research and education community.

eduroam allows students, researchers and staff from participating institutions to obtain Internet connectivity across campus and when visiting other

Accumulated requests statistic for country am
from 2017-01-01 18:31:00 to 2019-09-02 18:31:00



Digital services – digital libraries online



dLibra enables creating professional repositories of digital documents and sharing them with other people and systems on the Internet.

We are moving to the new platform based on dLibra system.

The new portal offers the users many powerful possibilities such as **searching the content** of the collected resources, searching bibliographic descriptions using **synonyms** dictionary, **grouping** digital publications and navigating their **structure**.



Digital services – data repository

Primary country mirror - mirrors.asnet.am

- Faster downloads for users
- Saving bandwidth
- Reproducible package installation

Additional packages:

- Turnkeylinux
- Raspbian
- Dotdeb
- ...



Archive Mirror at the Academic Scientific Research Computer Network of Armenia (ASNET-AM)

Digital services – streaming

A Low Latency, High Quality Audio/Video Transmission System (Lola)
for Network Musical Performances and Interaction

Estonian Academy of
Music and Theatre

CAPPELLA MARCIANA - VENICE



Fondazione Università
Ca' Foscari. Cà Dolfin



HOVER STATE CHAMBER CHOIR - YEREVAN



National Academy of
Sciences of Armenia

Digital services – computing



[HOME](#) [SERVICES](#) [DOCUMENTATION](#) [SIGN UP](#) [SIGN IN](#)

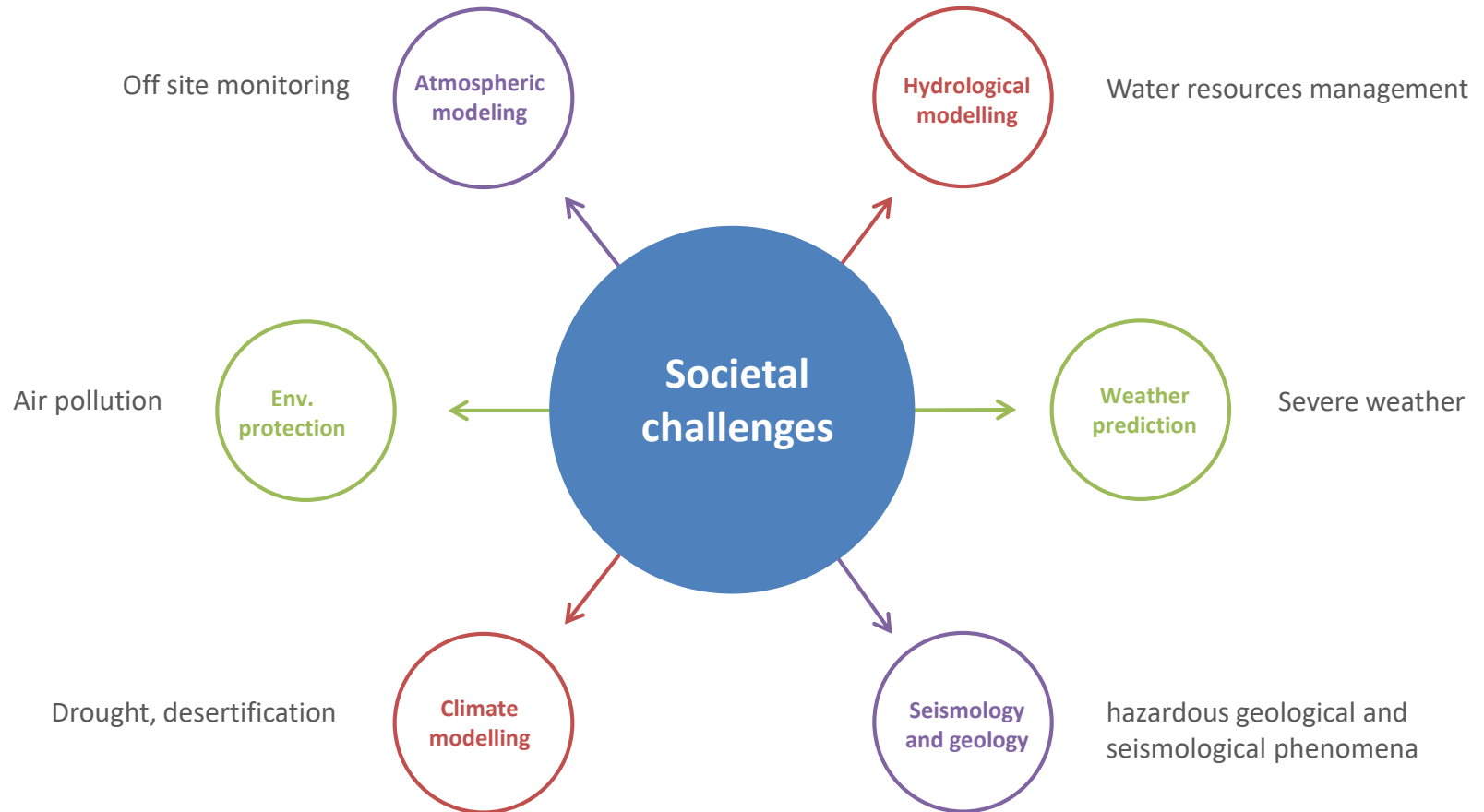
Welcome To ASNET Cloud Services

"Cloud is about how you do computing, not where you do computing." Paul Maritz
CEO of VMware

- Users dynamically choose a CPU, memory and storage configuration
- Easy access to vast computing power (520 virtual CPUs)
- Freely available open source infrastructure based on OpenStack software



Use cases - societal challenges

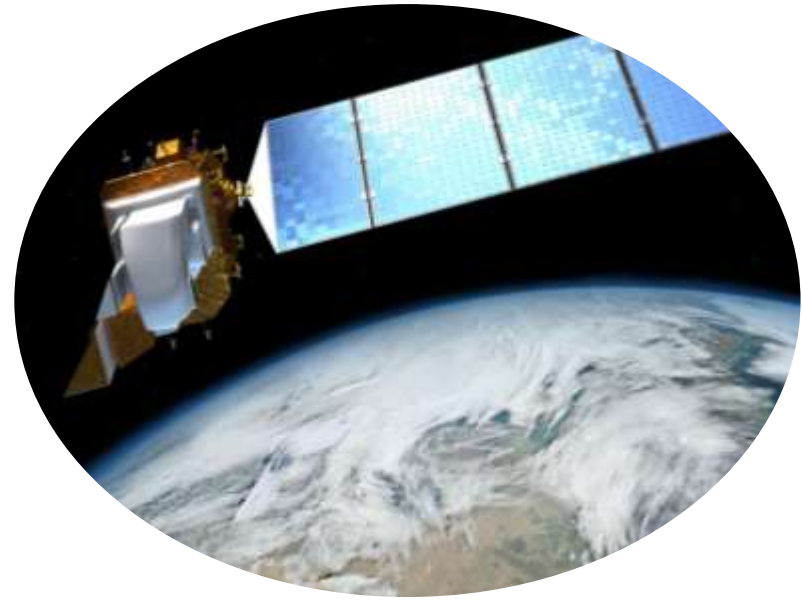


Use cases - societal challenges



Supporting weather 'nowcasting' to prevent damage in Armenia

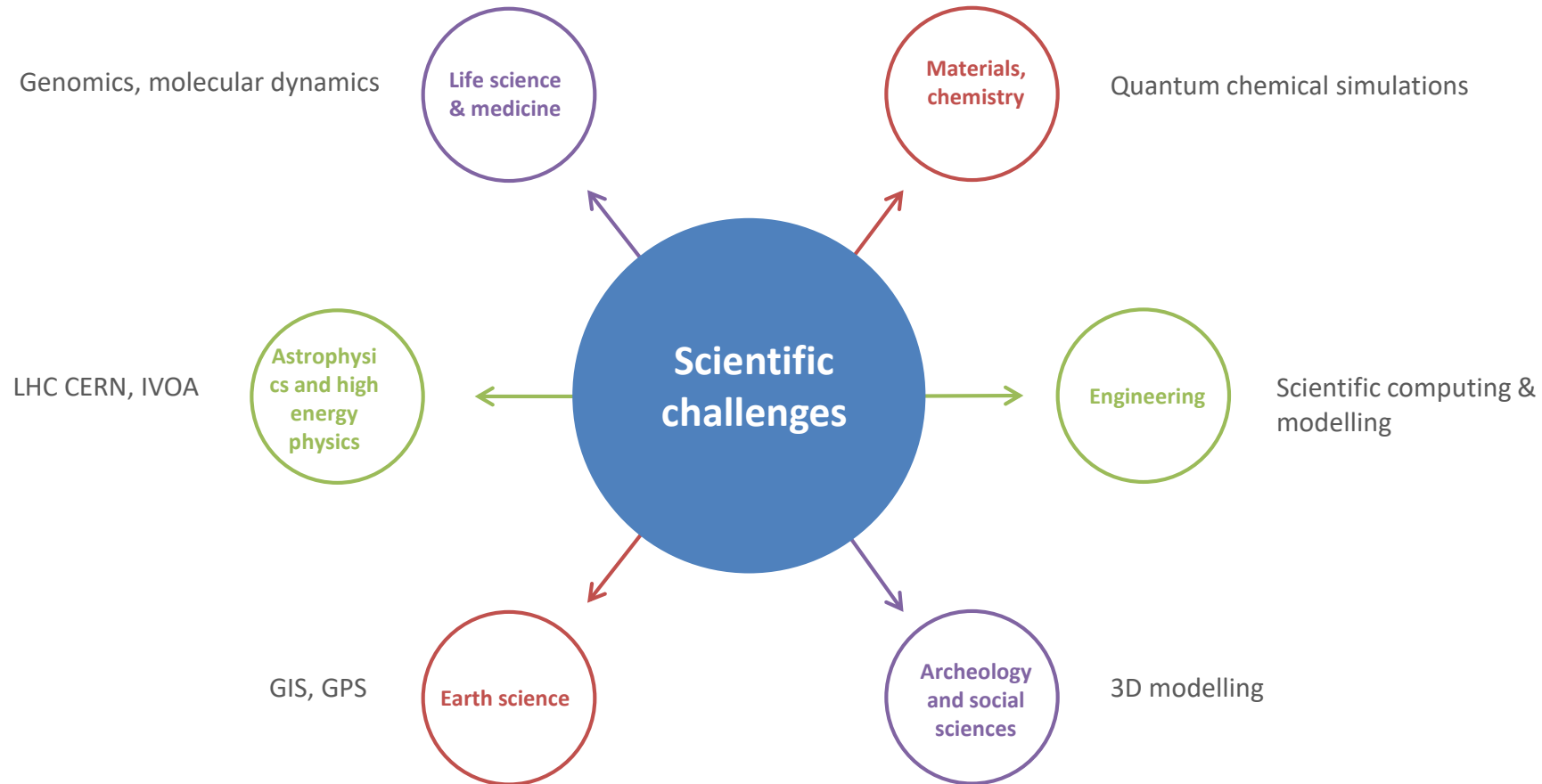
Armenian State Hydrometeorological and Monitoring Service



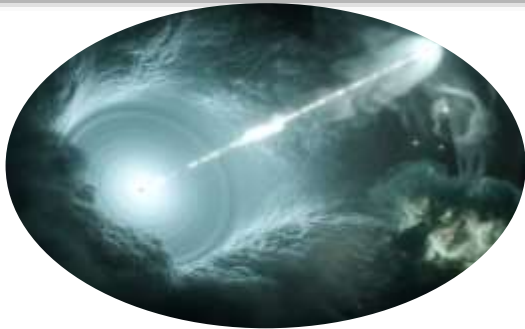
Monitoring the environment with Earth observation in Armenia

<http://datacube.sci.am>

Use cases - scientific challenges

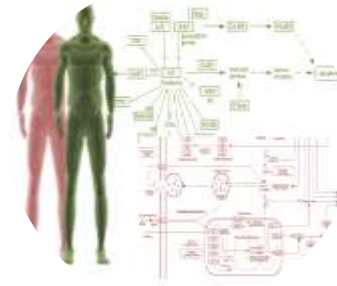


Use cases - scientific challenges



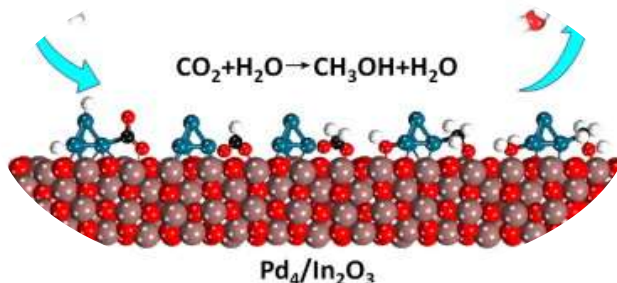
Supporting the multiwavelength monitoring
of the bright Blazars

International Centre for Relativistic Astrophysics



Empowering the Armenian Genome Project
with HPC resources

<http://armeniangenome.am>



Enabling computational materials discovery
and atomic scale simulations

Faculty of Radiophysics, Yerevan State University



Enabling laser physics and quantum
computing simulations

Institute for Physical Research of NAS RA

hank ou!