



30 years of Poznan Supercomputing and Networking Center

61-139 Poznań
ul. Jana Pawła II 10
phone: (+48 61) 858-20-01
fax: (+48 61) 852-59-54
office@man.poznan.pl
www.psnk.pl

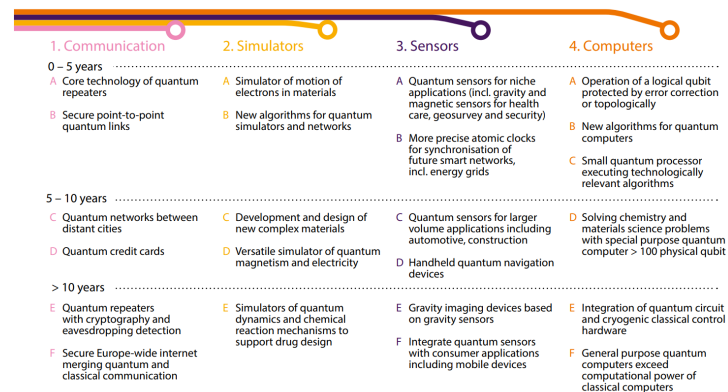
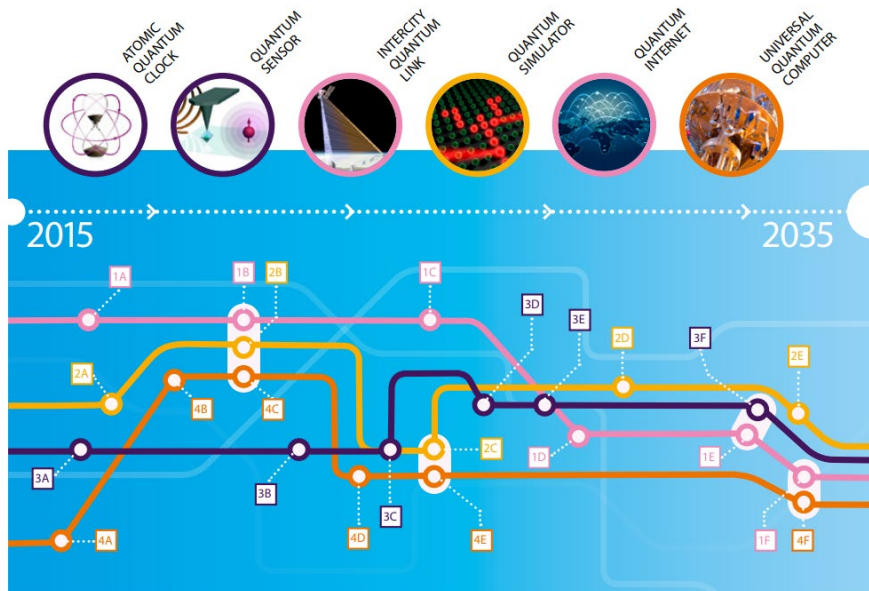
A large, stylized '30' is centered in the background of the right side of the slide. The background is a dark blue gradient with glowing blue and purple circuitry patterns, including various geometric shapes and lines that suggest a high-tech or quantum computing environment. The overall aesthetic is futuristic and digital.

Piotr Rydlichowski

**EuroQCI and EuroQCS activities - path
toward unified quantum
communication and computing
research infrastructures**

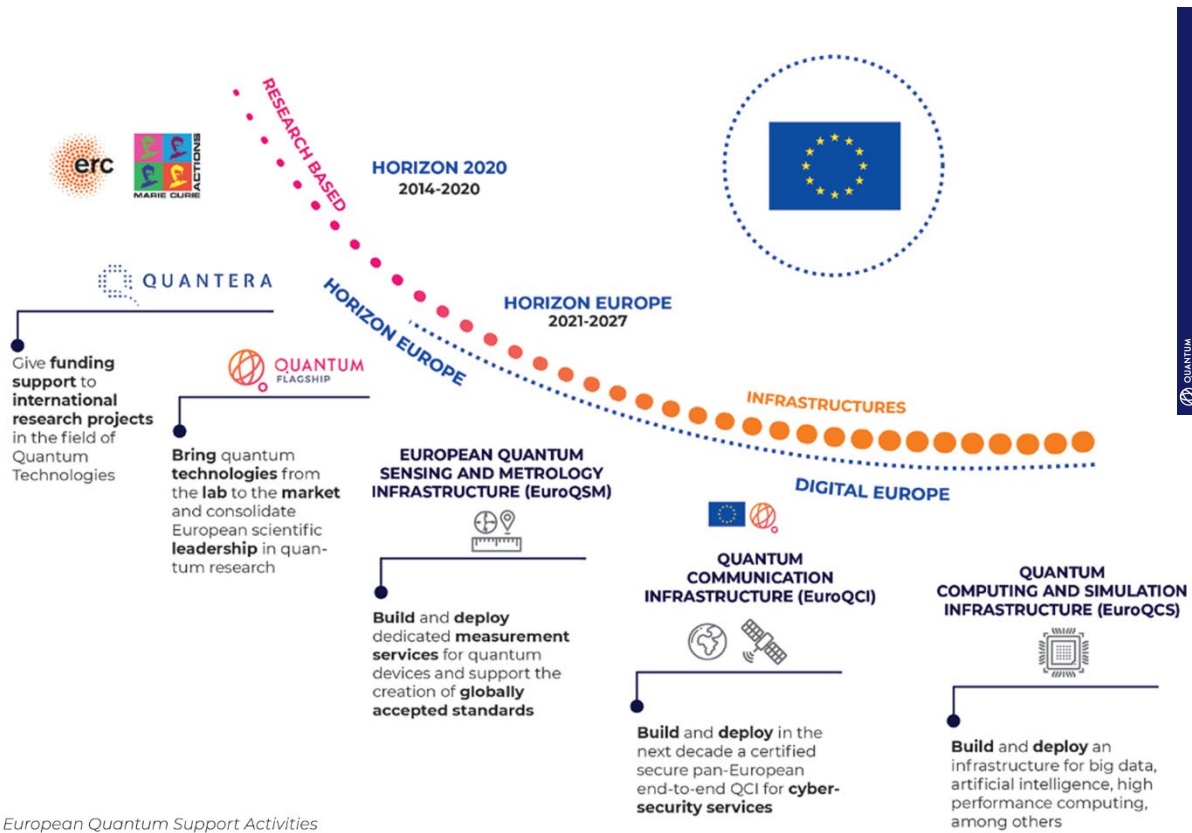
Quantum Technologies

Quantum Technologies Timeline



https://qt.eu/app/uploads/2018/04/93056_Quantum-Manifesto_WEB.pdf

Quantum Technologies



European Quantum Support Activities

https://qt.eu/app/uploads/2020/04/Strategic_Research-Agenda_d_FINAL.pdf



30 YEARS OF POZNAŃ SUPERCOMPUTING AND NETWORKING CENTER

Quantum Communication

EuroQCI and Digital Europe – start of projects in January 2023

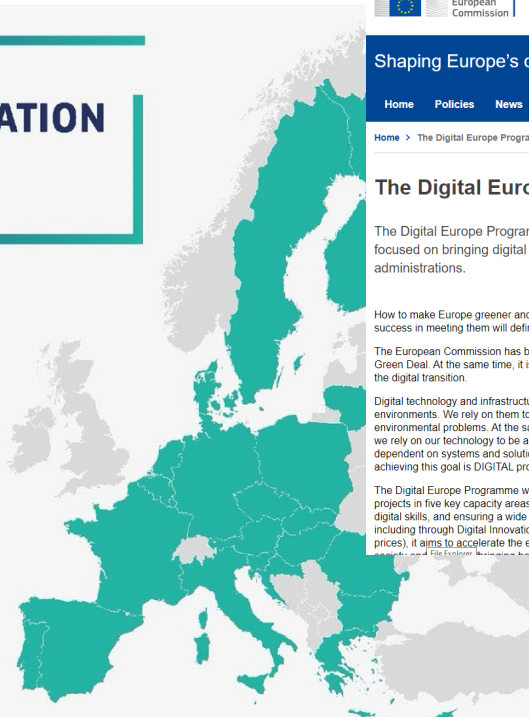
DECLARATION ON A QUANTUM COMMUNICATION INFRASTRUCTURE FOR THE EU

24 Member States

have signed a declaration agreeing to **work together** to explore how to build a quantum communication infrastructure (QCI) across Europe, boosting European capabilities in quantum technologies, cybersecurity and industrial competitiveness.

The countries taking part in the initiative are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

@FutureTechEU #EuroQCI



A screenshot of the European Commission website. The header features the European Commission logo and a search bar. The main navigation bar includes links for Home, Policies, News, Library, Funding, Calendar, and Consultations. The page title is "Shaping Europe's digital future". Below the navigation, there is a breadcrumb trail: "Home > The Digital Europe Programme". The main heading is "The Digital Europe Programme". The text below reads: "The Digital Europe Programme (DIGITAL) is a new EU funding programme focused on bringing digital technology to businesses, citizens and public administrations." There are three sub-sections: "How to make Europe greener and more digital are the twin challenges for our generation, and our success in meeting them will define our future.", "The European Commission has begun to look at a greener Europe through the lens of the European Green Deal. At the same time, it is opening up discussions about the move to a more digital world: the digital transition.", and "Digital technology and infrastructure have a critical role in our private lives and business environments. We rely on them to communicate, work, advance science and answer current environmental problems. At the same time, the COVID-19 pandemic highlighted not only how much we rely on our technology to be available to us, but also how important it is for Europe not to be dependent on systems and solutions coming from other regions of the world. Paving the way for achieving this goal is DIGITAL programme." The bottom section states: "The Digital Europe Programme will provide strategic funding to answer these challenges, supporting projects in five key capacity areas: in supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring a wide use of digital technologies across the economy and society, including through Digital Innovation Hubs. With a planned overall budget of €7.5 billion (in current prices), it aims to accelerate the economic recovery and shape the digital transformation of Europe's economy and citizens." On the right side, there is a sidebar with four buttons: "Funding & Tender Opportunities >", "Horizon Europe >", "Connecting Europe Facility >", and "Work as an expert: Call for".

Quantum Communication

EuroQCI and Digital Europe – start of projects

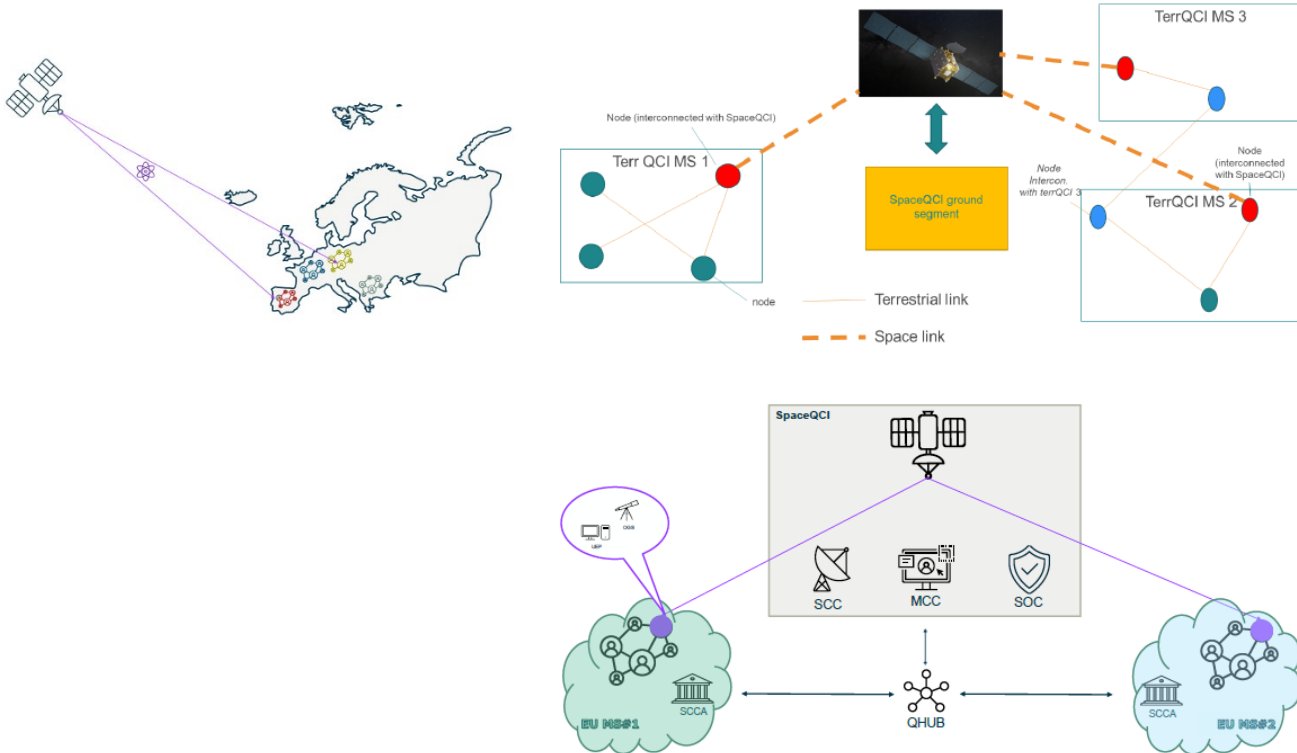


Figure 2: Overview of EuroQCI and its main elements

<https://digital-strategy.ec.europa.eu/en/euroqci-conops-concept-operations>

EuroQCS – start of projects in 2023



EuroQCS: European Quantum Computing & Simulation Infrastructure

PUBLISHED ON FEBRUARY 2ND, 2022



EuroQCS

European Quantum Computing & Simulation Infrastructure

Authors: D. Binosi^{1,2}, T. Calarco^{2*}, G. Colin de Verdière³, S. Corni⁴, A. Garcia-Saez⁵, M.P. Johansson⁶, V. Kannan⁷, N. Katz⁸, I. Kerenidis⁹, J.I. Latorre⁵, Th. Lippert^{2*}, R. Mengoni¹⁰, K. Michielsen^{2*}, J.P. Nominé³, Y. Omar¹¹, P. Öster⁶, D. Ottaviani¹⁰, M. Schulz^{12,13}, L. Tarruell¹⁴.

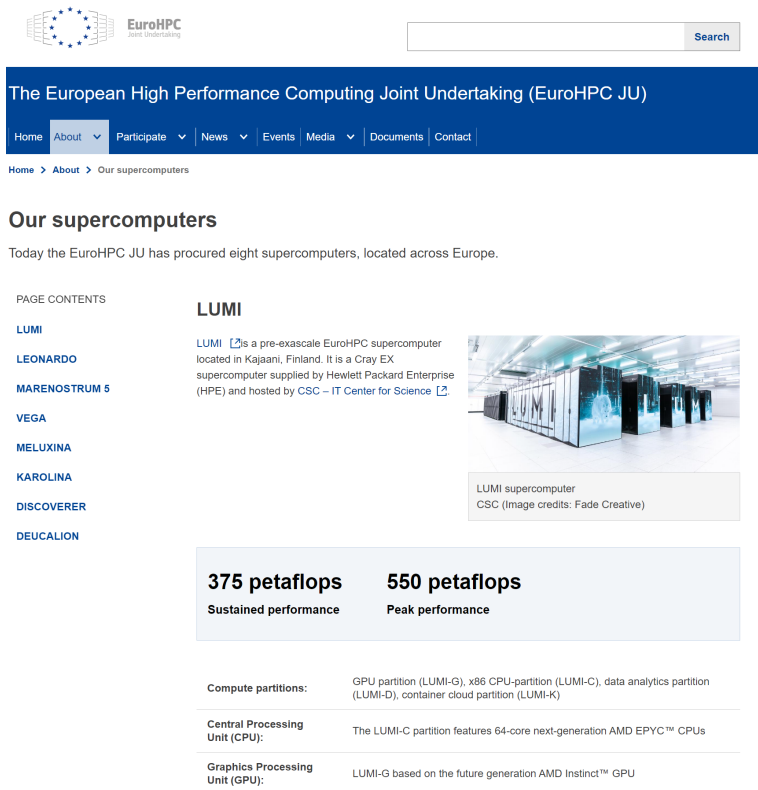
1. European Centre for Theoretical Studies in Nuclear Physics and Related Areas (ECT*), Italy
2. Forschungszentrum Jülich (FZJ), Germany
3. Commissariat à l'énergie atomique et aux énergies alternatives (CEA), France
4. University of Padua and CNR Institute of Nanoscience, Modena, Italy
5. Barcelona Supercomputing Centre (BSC), Spain
6. CSC – IT Center for Science, Finland
7. Irish Centre for High-End Computing (ICHEC), Ireland
8. The Hebrew University of Jerusalem, Israel
9. Centre National de la Recherche Scientifique (CNRS), France
10. Consorzio Interuniversitario del Nord est Italiano Per il Calcolo Automatico (CINECA), Italy
11. University of Lisbon, Portugal
12. Leibniz Supercomputing Centre (LRZ), Germany
13. Technical University of Munich (TUM), Germany
14. Institute of Photonics Science (ICFO), Spain

* Editing authors

<https://qt.eu/about-quantum-flagship/newsroom/european-quantum-computing-simulation/>

Quantum Computing

EuroQCS and EuroHPC



The screenshot shows the EuroHPC website. At the top, there is a search bar and the EuroHPC logo. Below that is a navigation menu with options: Home, About, Participate, News, Events, Media, Documents, and Contact. The main heading is 'Our supercomputers'. A paragraph states: 'Today the EuroHPC JU has procured eight supercomputers, located across Europe.' On the left, there is a 'PAGE CONTENTS' sidebar listing supercomputers: LUMI, LEONARDO, MARENOSTRUM S, VEGA, MELUXINA, KAROLINA, DISCOVERER, and DEUCALION. The main content area features a section for 'LUMI', which is described as a pre-exascale EuroHPC supercomputer located in Kajaani, Finland. It is a Cray EX supercomputer supplied by Hewlett Packard Enterprise (HPE) and hosted by CSC – IT Center for Science. An image of the LUMI supercomputer racks is shown. Below the image, it says 'LUMI supercomputer CSC (Image credits: Fade Creative)'. A performance summary box shows '375 petaflops Sustained performance' and '550 petaflops Peak performance'. At the bottom, there is a table with details about compute partitions, central processing units, and graphics processing units.

EuroHPC
Joint Undertaking

The European High Performance Computing Joint Undertaking (EuroHPC JU)

Home About Participate News Events Media Documents Contact

Home > About > Our supercomputers

Our supercomputers


Today the EuroHPC JU has procured eight supercomputers, located across Europe.

PAGE CONTENTS

- LUMI
- LEONARDO
- MARENOSTRUM S
- VEGA
- MELUXINA
- KAROLINA
- DISCOVERER
- DEUCALION

LUMI

LUMI is a pre-exascale EuroHPC supercomputer located in Kajaani, Finland. It is a Cray EX supercomputer supplied by Hewlett Packard Enterprise (HPE) and hosted by CSC – IT Center for Science.



LUMI supercomputer
CSC (Image credits: Fade Creative)

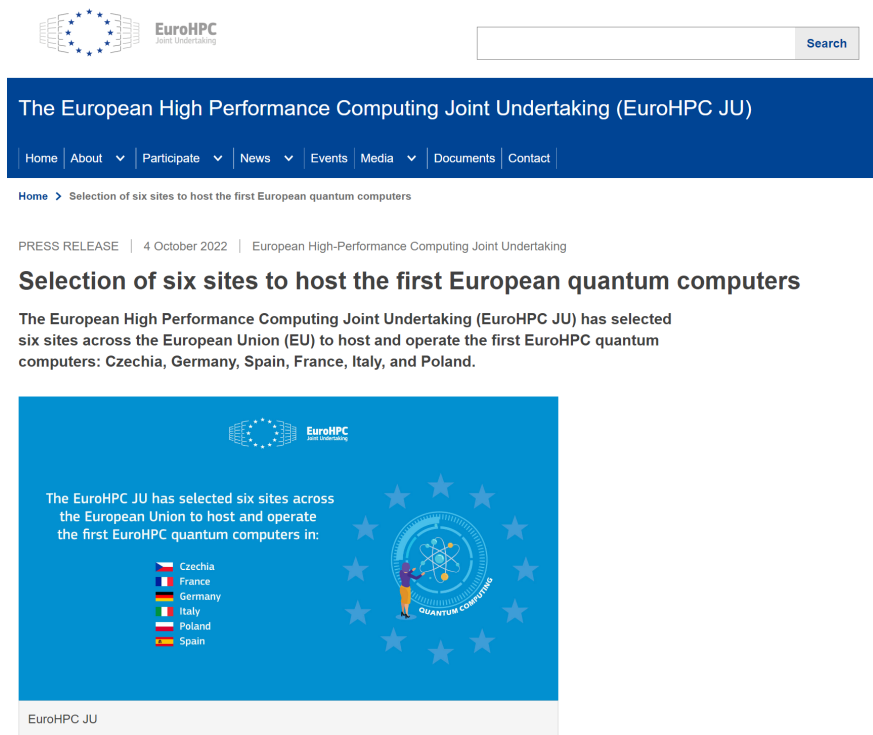
375 petaflops Sustained performance	550 petaflops Peak performance
---	--

Compute partitions:	GPU partition (LUMI-G), x86 CPU-partition (LUMI-C), data analytics partition (LUMI-D), container cloud partition (LUMI-K)
Central Processing Unit (CPU):	The LUMI-C partition features 64-core next-generation AMD EPYC™ CPUs
Graphics Processing Unit (GPU):	LUMI-G based on the future generation AMD Instinct™ GPU

https://eurohpc-ju.europa.eu/about/our-supercomputers_en

Quantum Computing

EuroQCS and EuroHPC



The screenshot shows the EuroHPC website interface. At the top left is the EuroHPC logo, which includes the European Union flag and the text "EuroHPC Joint Undertaking". To the right is a search bar with a "Search" button. Below the navigation bar, the main heading reads "The European High Performance Computing Joint Undertaking (EuroHPC JU)". A navigation menu includes links for Home, About, Participate, News, Events, Media, Documents, and Contact. The main content area features a breadcrumb trail: "Home > Selection of six sites to host the first European quantum computers". Below this is a "PRESS RELEASE | 4 October 2022 | European High-Performance Computing Joint Undertaking" header. The main title of the press release is "Selection of six sites to host the first European quantum computers". The text states: "The European High Performance Computing Joint Undertaking (EuroHPC JU) has selected six sites across the European Union (EU) to host and operate the first EuroHPC quantum computers: Czechia, Germany, Spain, France, Italy, and Poland." Below the text is a graphic with the EuroHPC logo and a list of the six selected sites with their respective national flags: Czechia, France, Germany, Italy, Poland, and Spain. The graphic also features a circular logo with a quantum circuit and the text "QUANTUM COMPUTING". At the bottom left of the graphic, it says "EuroHPC JU".

https://eurohpc-ju.europa.eu/selection-six-sites-host-first-european-quantum-computers-2022-10-04_en



30 YEARS OF POZNAŃ
SUPERCOMPUTING AND NETWORKING CENTER



Poznań Supercomputing and Networking Center

61-139 Poznań

ul. Jana Pawła II 10

phone: (+48 61) 858-20-01

fax: (+48 61) 852-59-54

office@man.poznan.pl

www.psnk.pl

