

# Sparkle and the OCRE24 Framework



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# Sparkle is a leading Global Telecom Service Operator

## Company Key Figures

Commercial Operations in **33 Countries**

Headcount **682**

**600,000 km** fiber optics

**169 PoPs** Network coverage <sup>(1)</sup>

PoPs via partners **>1,000**

Roaming agreements **>600**

**100%** TIM Group

**1<sup>st</sup>** International Service Provider in Italy

Among the **Top-10** Global Operators

Ranked **#4** for Seabone (AS 6762),

Sparkle's Global IP Transit Backbone <sup>(2)</sup>

**1,518** Customers

Voice Traffic **6B minutes**

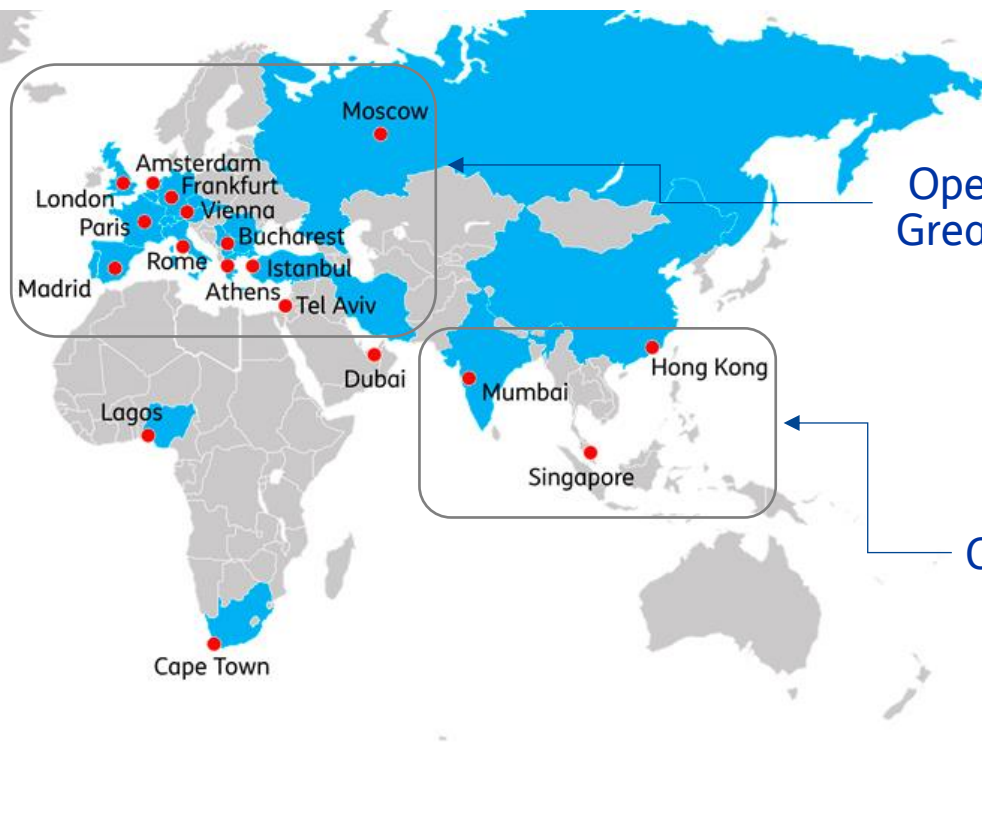
Data Traffic **133 Tbps**

**1 Bn EUR** Revenues

Operations  
in the  
Americas



Operations in Europe & the  
Greater Mediterranean Area



Operations in Asia-Pac

● Offices

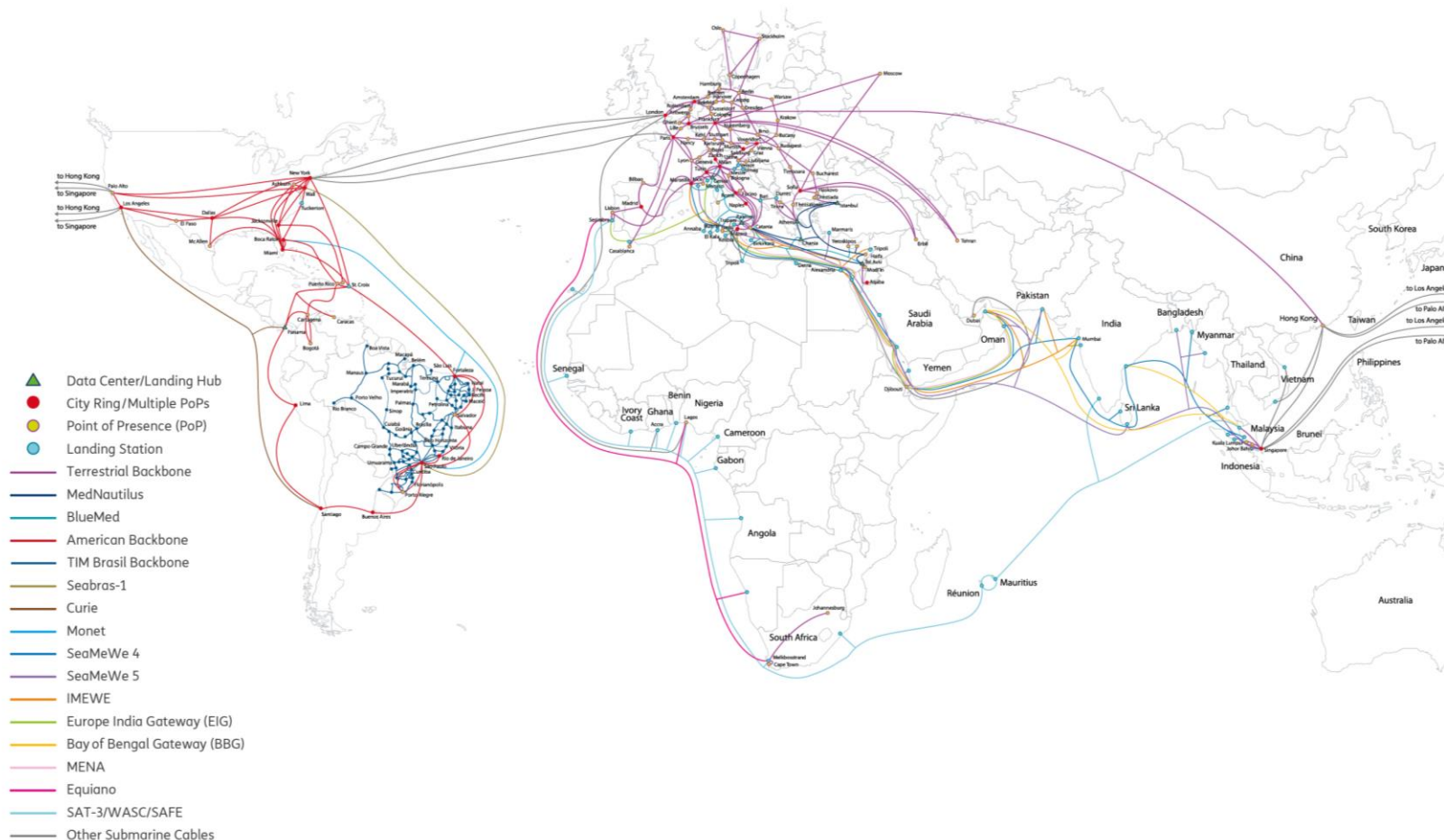
December 2023

(1) April 2024

(2) Source Caida - August 2024

# Global Backbone

Sparkle's backbone is the highway connecting any destination in the world, either with own reach and through agreements with over 200 regional and local operators.



Sparkle owns and manages a **global and technologically advanced proprietary network of over 600,000 km of fiber** which include **three major regional systems in Europe, the Mediterranean and the Americas** as well as an extensive ownership in major international submarine cables

- **84 cities in 42 countries**
- **169 proprietary PoPs (Point of Presence)**
- **>1,000 PoPs through partners**
- **Two global NOCs and one SoC with 24/7 coverage**

Data as of April 2024

# Our Service Portfolio perfectly matches R&E institutions' needs

## BACKBONE

IP Transit: secure and top Tier 1 connectivity to the Big Internet

Capacity: complete range of optical transport products designed for any connectivity needs

## INFRASTRUCTURE

Infrastructure: fiber and spectrum solutions delivered over resilient and distinguished assets

Colocation: full fledge solutions in state-of-the-art DC facilities

## NETWORK, CLOUD & SECURITY

Suite of top technologies blended with a differentiated set of monitoring/management capabilities and security features, enabling flexible and reliable connectivity for any-to-any reach and secure access to cloud

## MOBILE

Full IoT solutions for remote control of devices

Worldwide Data and Signalling interconnections

Multi-IMSI service to provide MVNOs with extensive roaming coverage

Distinctive SMS A2P solution for Providers and OTT

## VOICE

Voice Solutions offer worldwide voice capabilities to Carriers, Service Providers and Mobile Operators combining network reliability, competitive pricing, excellent routing solutions and geographical numbers



# OCRE 2024

Sparkle has been awarded as:

- **1<sup>st</sup> ranked Provider for AWS in all Countries.**
- **1<sup>st</sup> ranked for 19 Countries and 2<sup>nd</sup> ranked in 20 Countries for GCP.**

**This confirms Sparkle's role as the most trusted Global Public Cloud enabler for European R&E Community.**

# Sparkle's OCRE24 offering.

- 1 **12% Flat Discount** on AWS Public Price List and **10% Flat Discount** on GCP Public Price List
- 2 **Full Data Egress Waiver**: Sparkle applies no charge to traffic generated from AWS/GC resources (with no limit on the contract value)
- 3 **Volume & term-based discount (only for AWS)**: an additional discount based on revenues volume and contract term as per the below scheme:

Volume and term based discount				
Volume discounts	Tiers/Term	1Y	2Y	3Y
Total contract value	> 765k€	1%	1,50%	2%
Total contract value	> 1M€	1,50%	2%	2,50%
Total contract value	> 3M€	2%	2,50%	3%

Following the completion of a year of contract and based on the above scheme, Sparkle will calculate the amount which can be discounted to Customer and such value is deducted from the next invoicing cycles.



# Sparkle's additional Value for OCRE24 in a nutshell.



**Full Data Egress Waiver:** Sparkle applies no charge to traffic generated from AWS/GC resources (with no limit on the contract value)



Access for NRENs and NRENs' end Customers to Sparkle **Cost Monitoring & Advisory Console**, to monitor cloud resources consumption, with maximum flexibility and granularity, while benefiting from cost optimization, security and compliance functionalities



Remote and on site **professional services**, leveraging Sparkle **Multicloud Competence Centre** as well as on selected Partners with geographical focus.



For each new subscriber:

- 1-hour **webinar** with a Certified Cloud trainer for **landing zone design**
- 1-hour webinar to present the **best practices** on how to manage and **control the cost of cloud resource**

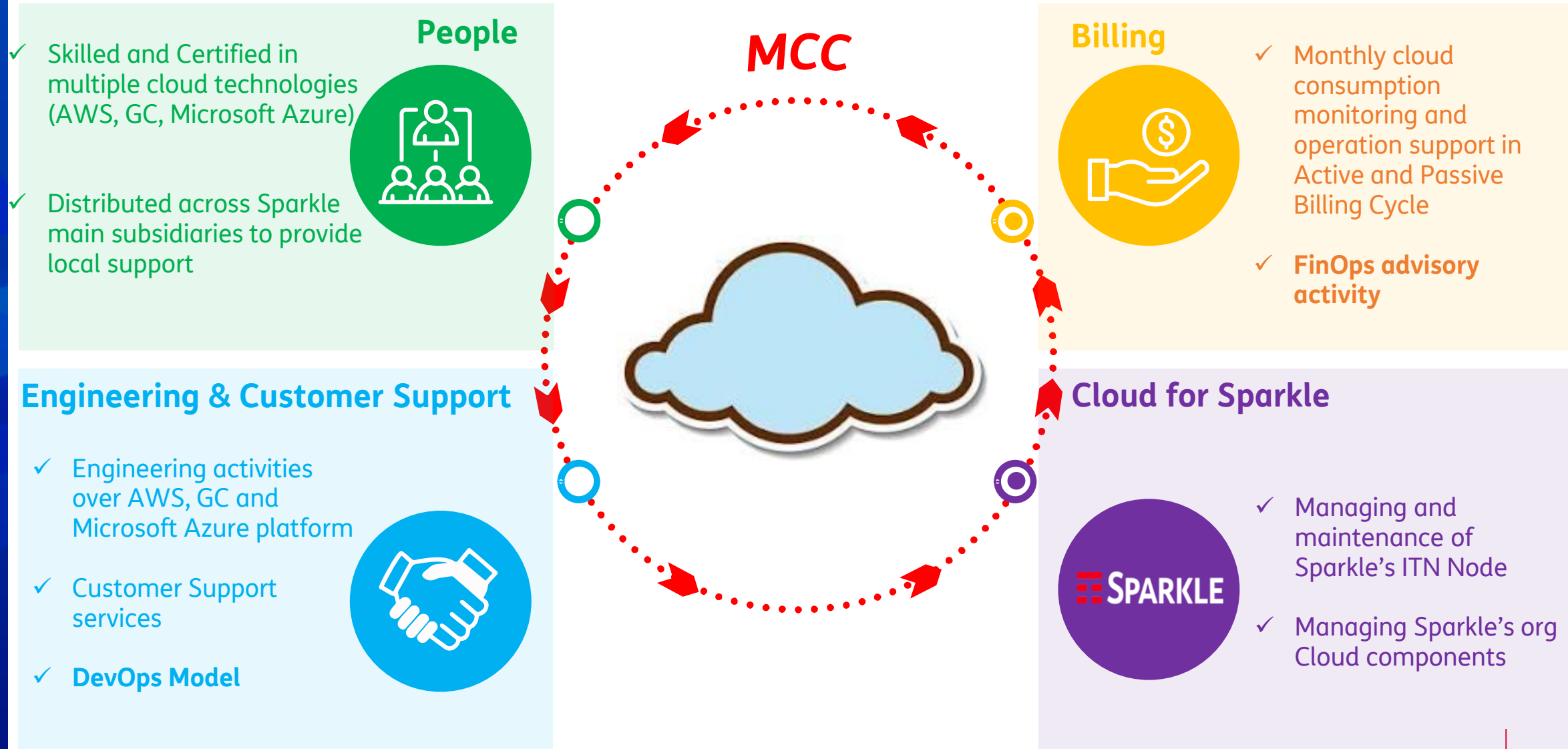
Upon request:

- 4-hours seminars to CxOs of HE institutions to present FinOps and consult them on the best way to save money on cloud based on the specific requirements.
- Workshops & webinars to train and advise on **specific vertical solutions**, beyond the Cloud Foundation offered by AWS/GC





# Focus on Customer Support: Sparkle Multicloud Competence Center





**Focus on Customer Support: Local presence everywhere for a closer interaction.**

**Leveraging on a network of selected Partners by Country, Sparkle is able to offer qualified pre-sale & post-sale specialistic support to deliver tailormade solutions at Customer premises, in local language.**



- Train on AWS/GC cloud computing methodology and best practices
- Analyze the organization's goals over the next 1-3 years
- Assess the Customer critical applications, IT Infrastructure, applications, HW & SW, security, cloud in use
- Design the Cloud Architecture best fitting the requirements
- Support application's migration to the Cloud
- Manage cloud infrastructure

# OCRE Success Stories.



## Analysis of Liquid Biopsies for real-time tumor monitoring

Reducing the turnaround time for genetic analysis pipeline processing and execution is one of the critically needed improvements to meet the current challenge of expanding operations. In the current situation, the HMG group utilizes a local computer cluster offered by the UAntwerp but is now experiencing that with the growth of their data processing, needs for quick results and collaboration with consortium partners, they have reached the limitations of the classical server hardware. **Year 2023 - Allocated Budget: 400K**

The logo of KU Leuven, featuring the text 'KU LEUVEN' in white capital letters on a dark blue rectangular background.

**KU LEUVEN**

## Data processing activities in the iCANDID 3.0 SSH FAIR Data Hub

AI and machine learning is something many researchers working with digital data in social sciences and humanities are interested in but do not necessarily have the knowledge and expertise to make use of. They are often stuck with free tools offering graphical user interfaces, only allowing them to process small amounts of data with variable and often low-quality results. **Year 2022 - Allocated Budget: 180K**



## Digital Healthcare Training in the Metaverse

This project aims to automate the use of semantic content to make it accessible without further processing. Imagine several sources in different languages talking about a similar subject. The ambition of RT is to make it possible to interact with this content in natural language to query it in natural language and obtain answers of a quality equivalent to their sources. **Year 2022 - Allocated Budget: 600K**



## Federated Deep Learning for Predictive Medicine

The general objective of the project is to study federated machine learning cloud systems for precision medicine/healthcare, by developing and implementing large-scale federated deep learning models that can be trained and deployed on high-performance cloud systems. **Year 2023 - Allocated Budget: 400K**

# OCRE Success Stories.



## Empowering Research Communities through cross-sector knowledge sharing

OpenScienceLabs (OSL) are a standard based method to share ready-to-use HPC code and results using cloud technology, providing a universal wrapper to run code on something akin to a VM in the browser with access to parallel or special purpose hardware. This is achieved by leveraging cloud-native methods and DevSecOps such as containerisation, orchestration and automation as well as security best practices. Their design offers low entrance to new or non-expert users, in that it removes any need for compilation, installation or any operational aspects for the end-user.

The OSL can be accessed by an end-user on minutes-timescales via a browser. After an initial co-development phase between a Research Group and the Service Provider, any HPC codebase can be made to run in an OSL. Currently, use-cases for Peer Review-Companions, Outreach, Open Sourcing, Self-Service On-boarding and HPC-Summer Schools are used to continuously improve the OSL design for usability, scalability and portability.

**. Year 2023 - Allocated Budget: 500K**

## Enhancing cloud capacity in a distributed Research environment

D4Science is hosted within ISTI, a research organization that has been offering Data Infrastructure and IT services for scientific research to over 30,000 researchers in Europe since 2014.

D4Science offers these IT services using as back-end the hardware infrastructure available in 4 Italian data centers (owned by the CNR and GARR) while at the front-end D4Science makes available to researchers a web interface called Virtual Research Environment which is a pre-configured desktop with scientific applications and computing resources.

The Geant/EOSC tender project envisaged recreating these Virtual Research Environments (VREs) on Google Cloud Platform (GCP) as a complement to the VREs they have historically managed on-premise to enable 2 use cases:

1. they organize several research datathons during the year and the on-premise resources are not enough to manage the computational needs for these events that generate peaks in consumption. The VREs on GCP, thanks to the elasticity of the Cloud, will allow these events to be dynamically organized throughout the year with an even larger number of participants.
2. Also the recurring research activities will benefit from VREs on the Cloud to manage unexpected peaks or seasonality of consumption

**Year 2023 - Allocated Budget: 600K**





# OCRE Success Stories.



## Complementing the INCD services with access to Google Cloud through Sparkle.

INCD is a digital research infrastructure within the Portuguese roadmap of research infrastructures of strategic interest of the Portuguese Foundation for Science and Technology (FCT).

INCD enables researchers to effectively participate in compute and data intensive projects at national and international level. Internationalization is a fundamental mission of INCD, which participates in European projects and links with European digital infrastructures and initiatives, like EGI federation, Iberian distributed computing infrastructure (IBERGRID), Worldwide LHC Computing Grid (WLCG) and the European Open Science Cloud (EOSC).

Through this project, we offered INCD the opportunity to complement its capacity and offer of on-premise cloud resources with the potential and flexibility of Google's Public Cloud. The result was the creation of an additional channel for the allocation of resources for the development of a very large number of research projects, be they small, medium or large. The design and creation of the application and awarding mechanisms completed the implementation. **Year 2022 - Allocated Budget: 600K**



## Realizing Scientific Breakthroughs in Childhood Cancer

The Máxima is pursuing a historical leap forward in the form of the Dutch Comprehensive Childhood Cancer Commons (NL-4C) initiative, a strategic transformation to data-driven childhood cancer care. The aim is to realize a harmonized data collection of childhood cancer genomes and perform state-of-the-art data analyses to support innovations in childhood cancer research, diagnostics and treatment. Data science and engineering are the centerpieces of this vision for improved childhood cancer care. **Year 2022 - Allocated Budget: 400K**



# Focus on what moves the world forward: research, education, discovery

Sparkle takes care of the rest



**Let's keep in touch!**

**Commercial Team**

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**Multi Cloud Competence Center**

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**Website for R&E**

**[OCRE.cloud.tisparkle.com](http://OCRE.cloud.tisparkle.com)**

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# Grazie!

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