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# VINEYARD

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# VERSATILE INTEGRATED ACCELERATOR-BASED HETEROGENEOUS DATA CENTRES

[www.vineyard-h2020.eu](http://www.vineyard-h2020.eu)



Co-funded by the Horizon 2020 Framework Programme of the European Union under Grant Agreement n° 687628

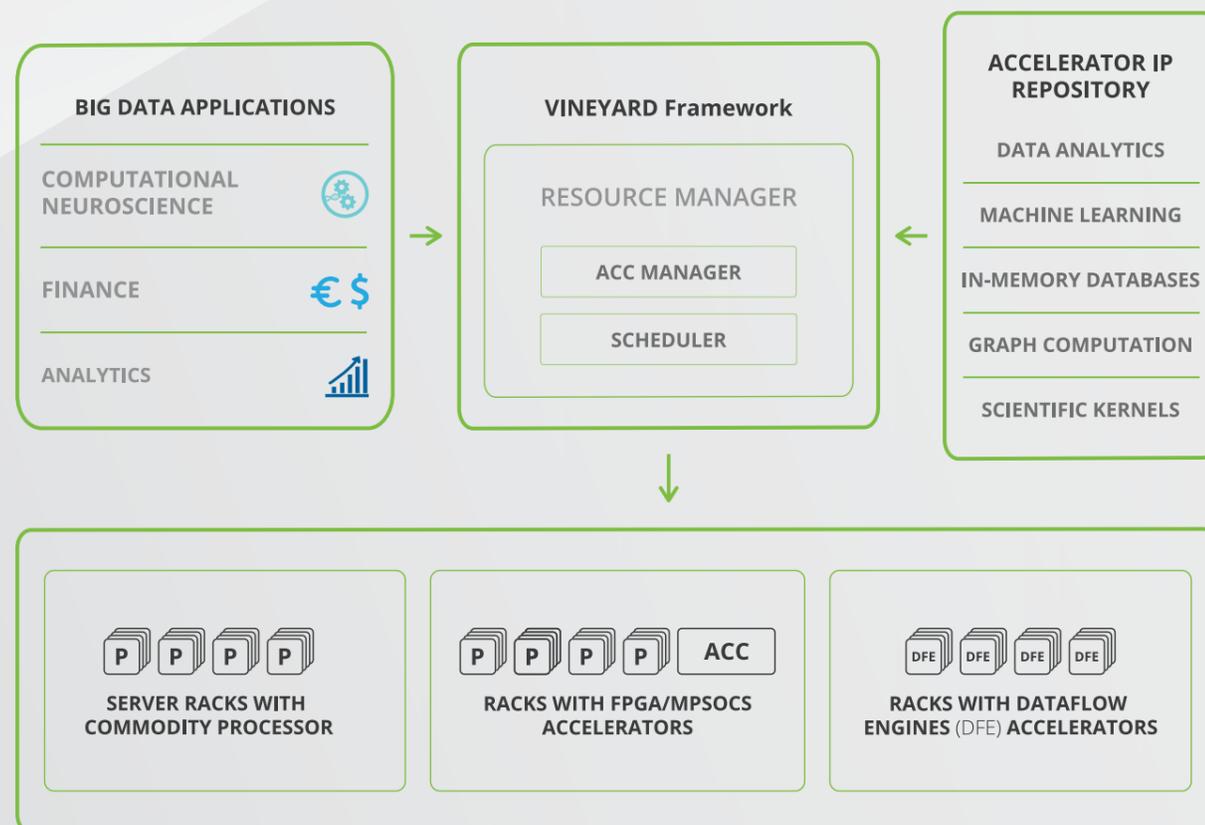


**VINEYARD**  
Versatile Integrated Accelerator-based  
Heterogeneous Data Centres

WEBSITE  
[WWW.VINEYARD-H2020.EU](http://WWW.VINEYARD-H2020.EU)

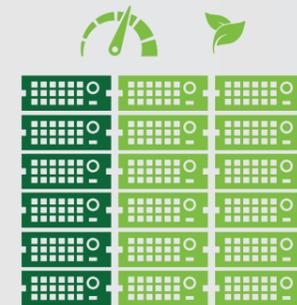
# ACCELERATED BIG DATA CLOUD APPLICATIONS, IN GREEN DATA CENTRES, SEAMLESSLY

VINEYARD project aims to increase significantly the **performance** and the **energy efficiency** of the data centres for cloud computing applications.



## ADVANTAGES

- HIGHER PERFORMANCE
- LOWER ENERGY CONSUMPTION



## DEMONSTRATION IN REAL-WORLD APPLICATIONS



### COMPUTATIONAL NEUROSCIENCE

Brain exploration through simulation of biologically accurate neuronal models



### FINANCIAL APPLICATIONS

Trading system operations and Pre-trade risk management



### DATA ANALYTICS

TPC-C (on-line transaction processing (OLTP) benchmark)  
TPC-H (decision support benchmark)

## EXPECTED IMPACT

- Reinforce Europe's position in energy-efficient computing
- Foster innovation in the area of silicon IPs
- Increase the adoption of form-factor data centres and heterogeneous highly parallel computing systems
- Allow the seamless utilization of hardware accelerators in data centres
- Allow the increased adoption of concurrency in applications and foster the utilization of hardware accelerators