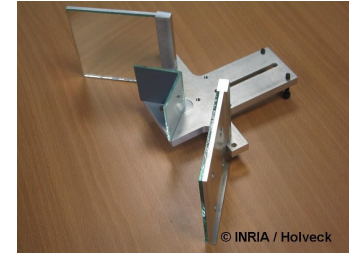
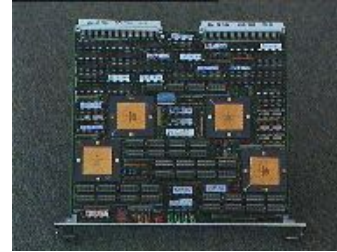


# DENERGIUM

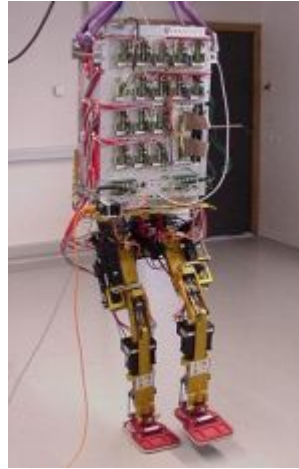
Digital Energy Optimum

# Inria...JHU...Inria...DENERGIUM



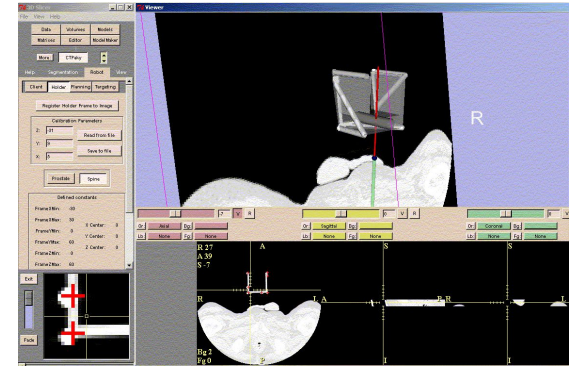
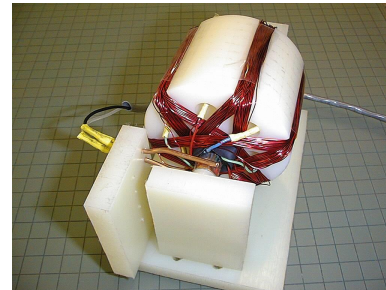
1988-1995	1996-2001	2002	2003-2009	2009-2021	2022	2023-
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# Inria...JHU...Inria...DENERGIUM



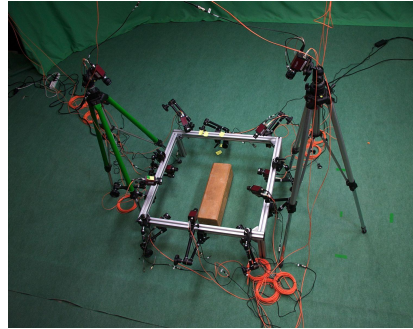
1988-1995	1996-2001	2002	2003-2009	2009-2021	2022	2023-
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# Inria...JHU...Inria...DENERGIUM



1988-1995	1996-2001	2002	2003-2009	2009-2021	2022	2023-
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# Inria...JHU...Inria...DENERGIUM



1988-1995	1996-2001	2002	2003-2009	2009-2021	2022	2023-
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# Inria...JHU...Inria...DENERGIUM

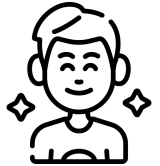


1988-1995	1996-2001	2002	2003-2009	2009-2021	2022	2023-
-----------	-----------	------	-----------	-----------	------	-------

# Inria...JHU...Inria...DENERGIUM



Impact



Finance



Réglementation



1988-1995

1996-2001

2002

2003-2009

2009-2021

2022

2023-

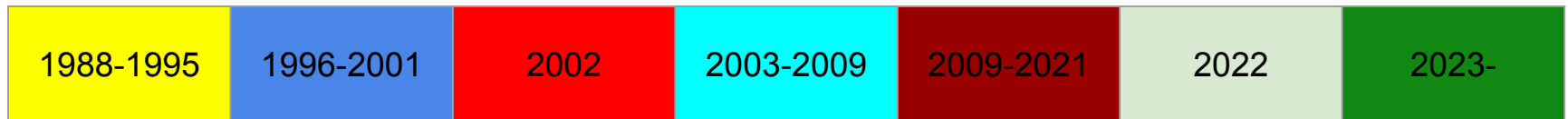
Inria...JHU...Inria...DENERGIUM

# DENERGIUM

Digital Energy Optimum

**DENERGIUM is a technology startup, software editor and positive environmental company.**

**DENERGIUM provides solutions to optimize the use of IT infrastructures.**



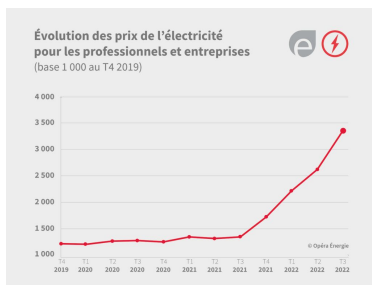


# Companies and digital technology



## Exploding energy bill

Electricity prices expected to double by 2030



## More restrictive regulations

Éco Énergie Tertiaire is a French regulatory obligation that commits all actors in the tertiary sector to energy sobriety.



## A degraded image

More difficult to recruit talent  
And what about customers?



# DENERGIUM provides solutions



Efficiency gains  
of up to 15%

KPI  
Automatic generation  
of reports

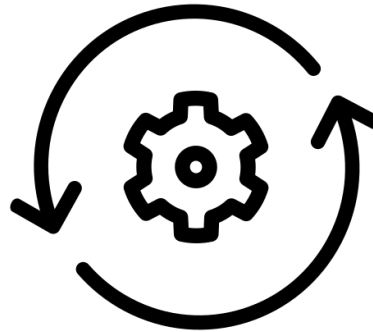
CSR project

**Make the use of IT infrastructures more efficient**

# The EnergyScopium software suite

Technology	UX manager	UX user
------------	------------	---------

Software probes



Reliable measurements  
Mathematics models and AI  
Brand datasheet integration  
Thermal consideration to calculate CO2

Financial



Regulation



Impact



# The EnergyScopium software suite

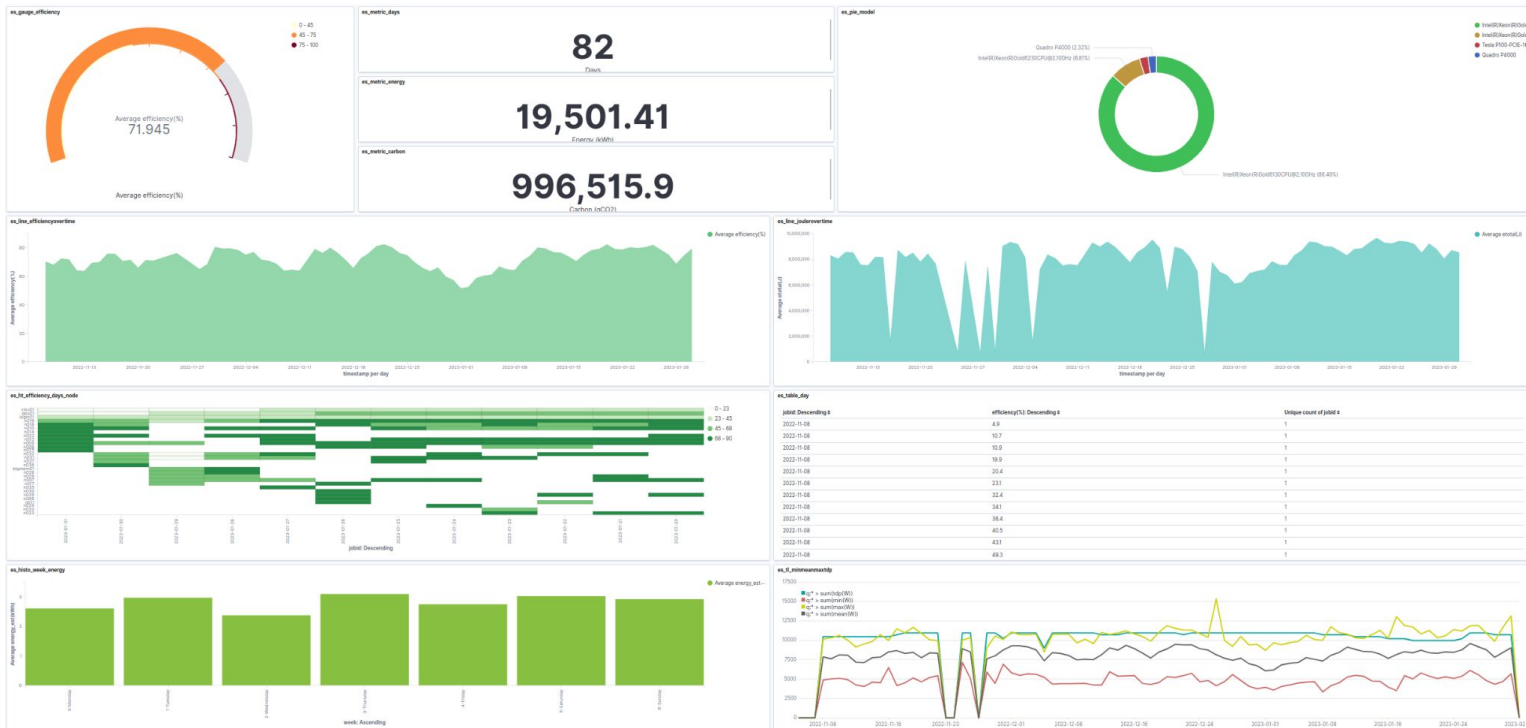
Technology

UX manager

UX user

Dynamic dashboard, fine grain (server, day)

(KPI, dashboards, recommendations)



Réglementation



# The EnergyScopium software suite

Technology	UX manager	<b>UX user</b>
------------	------------	----------------

Banner exposed for each job

EnergyScopium 2023/02/27 09:48:47 jobid:2356890 Dur:75(sec)  
E:752(J) Efficiency(%):66.84 E(est):3002(J) Carbon:0.1(gCO2)

to know

E report



energy report available for each job

# The EnergyScopium software suite



to explore



Each user has its "energy workshop"

Hervé MATHIEU 1 006 tokens left

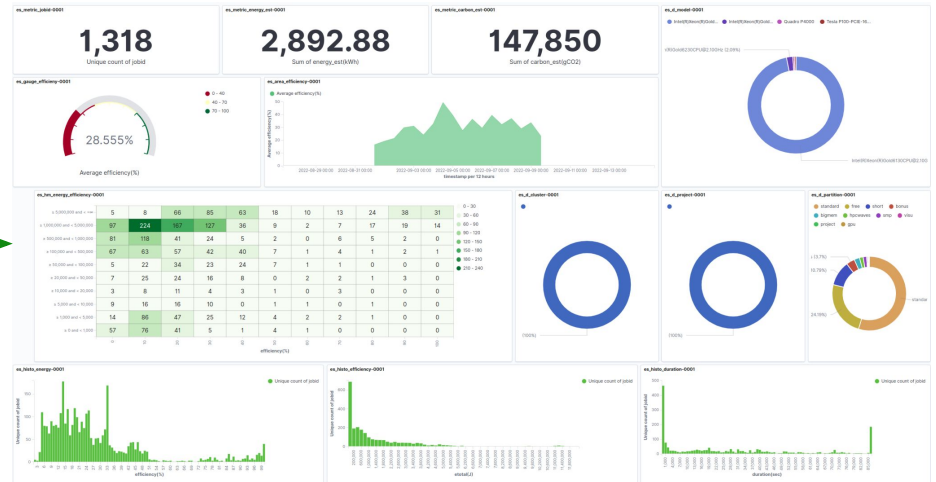
My dashboard   My data   My account   Help 1

### My Data

Data name filter:    Cluster filter:    Date between:  to  /  to

Liste des données d'entrée refresh

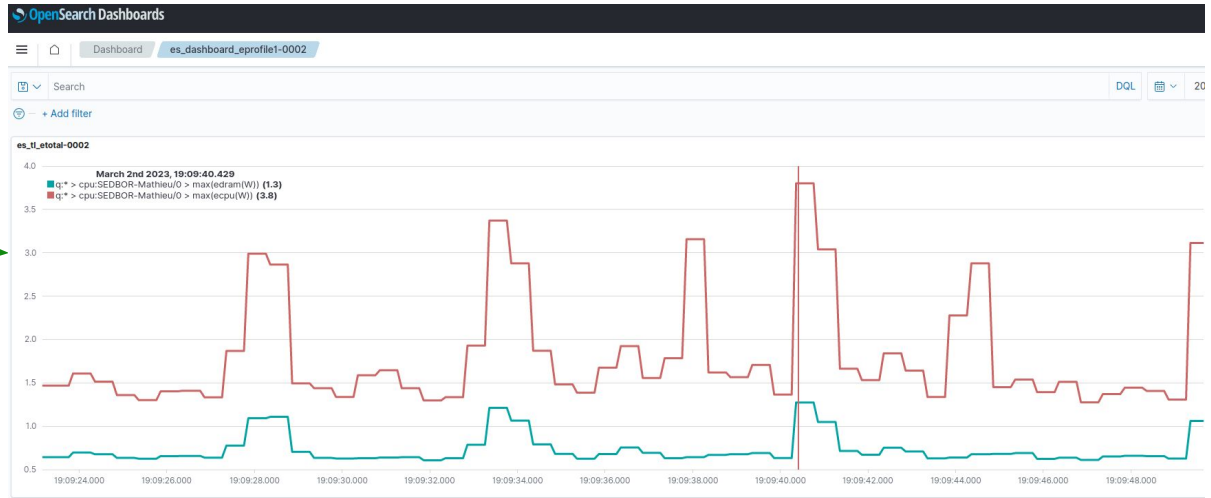
Job id	Name	Cluster	Date	Result File	Dashboard
2023s00020	energyscopium_20230227095921		27/02/2023		
2023s00019	energyscopium_20230227094846		27/02/2023		
2023s00018	energyscopium_20230227094850		27/02/2023		
2023s00017	energyscopium_20230227093949		27/02/2023		
2023s00009	energyscopium_20230224133751		24/02/2023		



# The EnergyScopium software suite



to understand  
to optimize



Data in an open format  
Fine grain (processor and GPU)  
Easy to integrate in a CI/CD processus

```
"eprofile_period(ms)": 1000,  
"nb_sample": 61,  
"tags": {  
  "es_total": {  
    "start": "2023-03-13T23:59:50",  
    "stop": "2023-03-14T00:00:50",  
    "start(sec)": 0,  
    "stop(sec)": 60,  
    "joule(J)": 180.97  
  }  
},  
"etotal(W)": [  
  2.72,  
  2.97,  
  2.94,
```

# Testimonials (POC used in 2022)



Mathilde Jay

**PhD Student at UGA, CNRS, Inria, LIG**

I use **DENERGIUM** almost every day as part of my research on the energy consumption of AI models. It is one of the only tool monitoring the GPU power consumption in real-time.



Iuliana Vladisavlevici

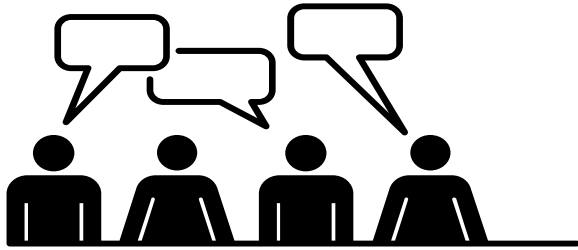
**Researcher at Bordeaux University**

*“I was not expecting these numbers which are quite big I think”*

Iuliana has used **DENERGIUM** Monitor to get the total impact of her research work led on Curta (MCIA's cluster) in terms of kWh, Cost and CO2 emission.



# DENERGIUM



Thanks for your attention



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is supported by



**Inria**  
StartupStudio

 OVHcloud

**Startup**  
Program