

# **MOUZN:** An Open Cloud Computing Platform for Research and Education

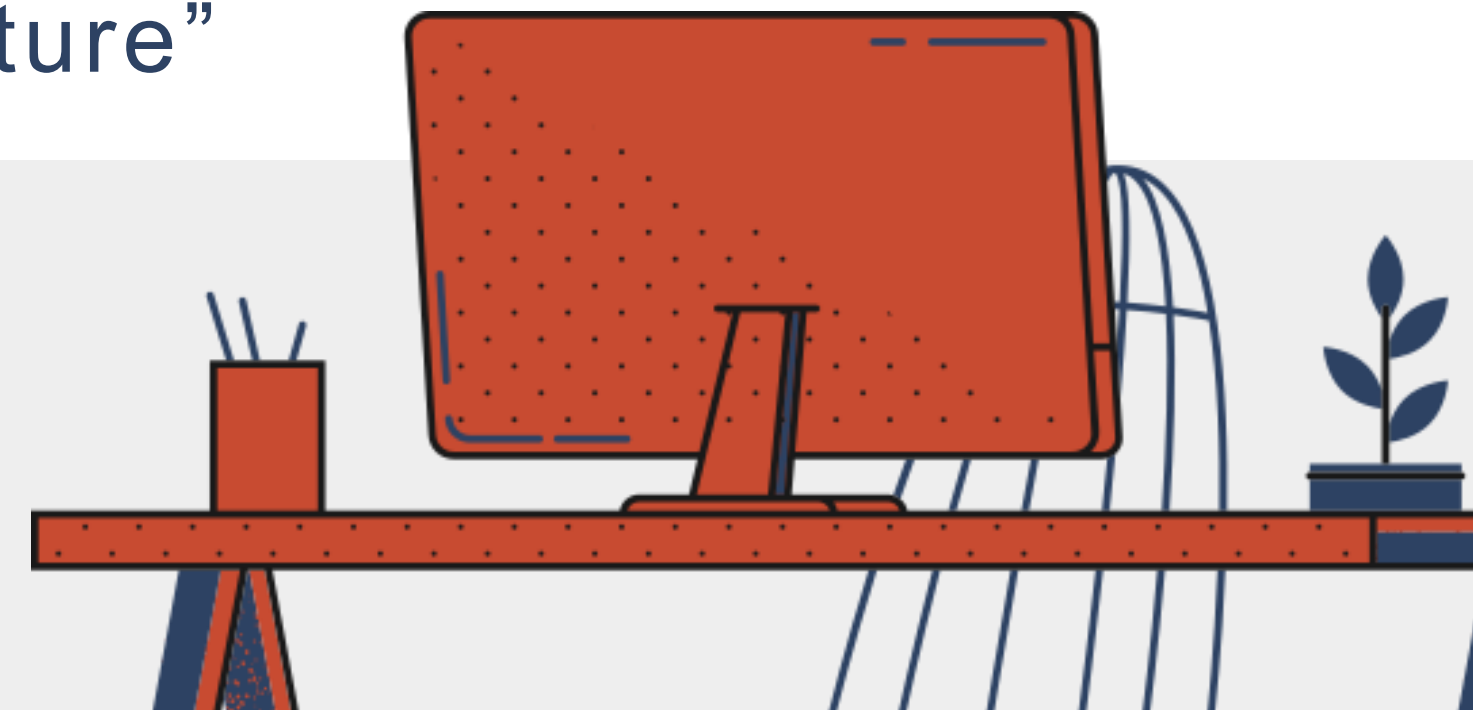


A Regional conference on “MARWAN: An innovation Enabler through Advanced e-Infrastructure”

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Dailyapps

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# Plan

- I Problematique
- II Cloud computing
- III Mouzn platform
- IV Demonstration
- V Discussions and Questions

## The “Traditional” Labs

- Lack of resources (Computer, Storage, Networking)
- Difficulty accessing these resources.
- Difficulty of collaboration for IT projects.



## The “Traditional” Labs

- Each institution requires a set of hardware (switches, routers, cables, computers)
- Hardware gets outdated pretty quickly
- Some solutions are vendor specific
- The equipment is not used during periods of time
- High CAPEX/OPEX



# MOUZN PLATFORM



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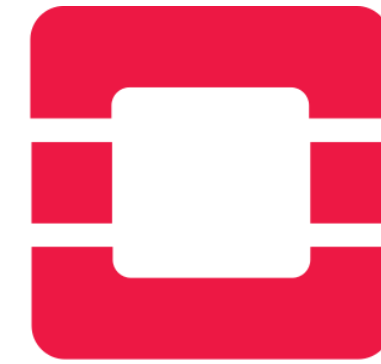


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- Fast deployment of resources
- Optimized use of resources
- Remote access (Anytime and Anywhere)
- Scalability
- Reduction of costs



- **OpenStack** started in 2010 as a joint project of **rackspace** and some **NASA**.
- The largest Open Source project.
- In 2018, more than **500** companies had joined the project (Google, Dell, RedHat, Cisco, Huawei, IBM, Oracle, etc.)
- \$5.01 Trillion market size by 2026
- 65+ Services



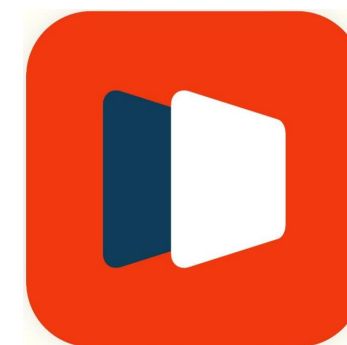
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## Mouzn Academic Cloud



### Virtual LABs

- Provide predefined LABs for teaching and research.

### A good place for a Startup

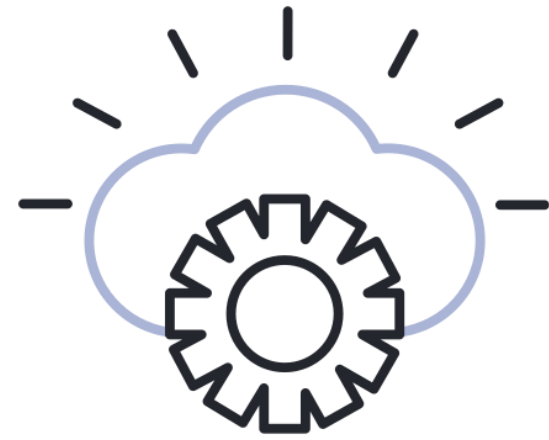
- Provide a platform for innovations in IT, security, networking, Big Data...

### Data sovereignty

- Data stored internally.



- Use **Mouzn** to perform LABs
- Institutions do not need hardware (They can use each others' resources)
- Reservation of resources depends on availability and your counted consumption period (max 6 months per resource)
- Teach new technologies (DNS, IoT...) on Mouzn



Pooling of resources



Cooperation and  
Innovation



Data sovereignty



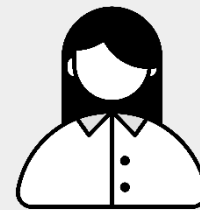
Free access

## profiles



admin

A global platform administrator.



lead

Often a professor in university.

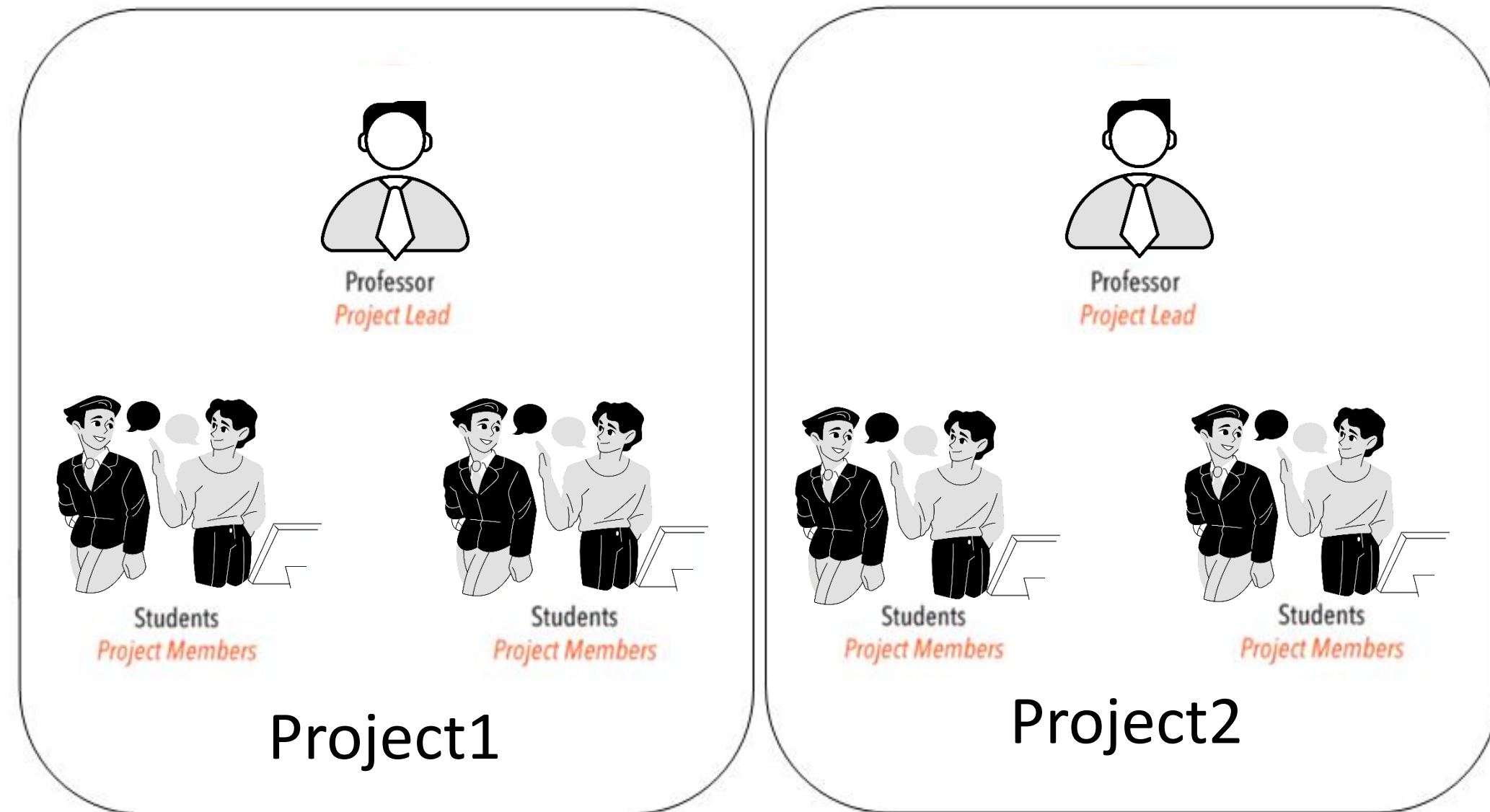


User

Standard user of the platform. Often a student

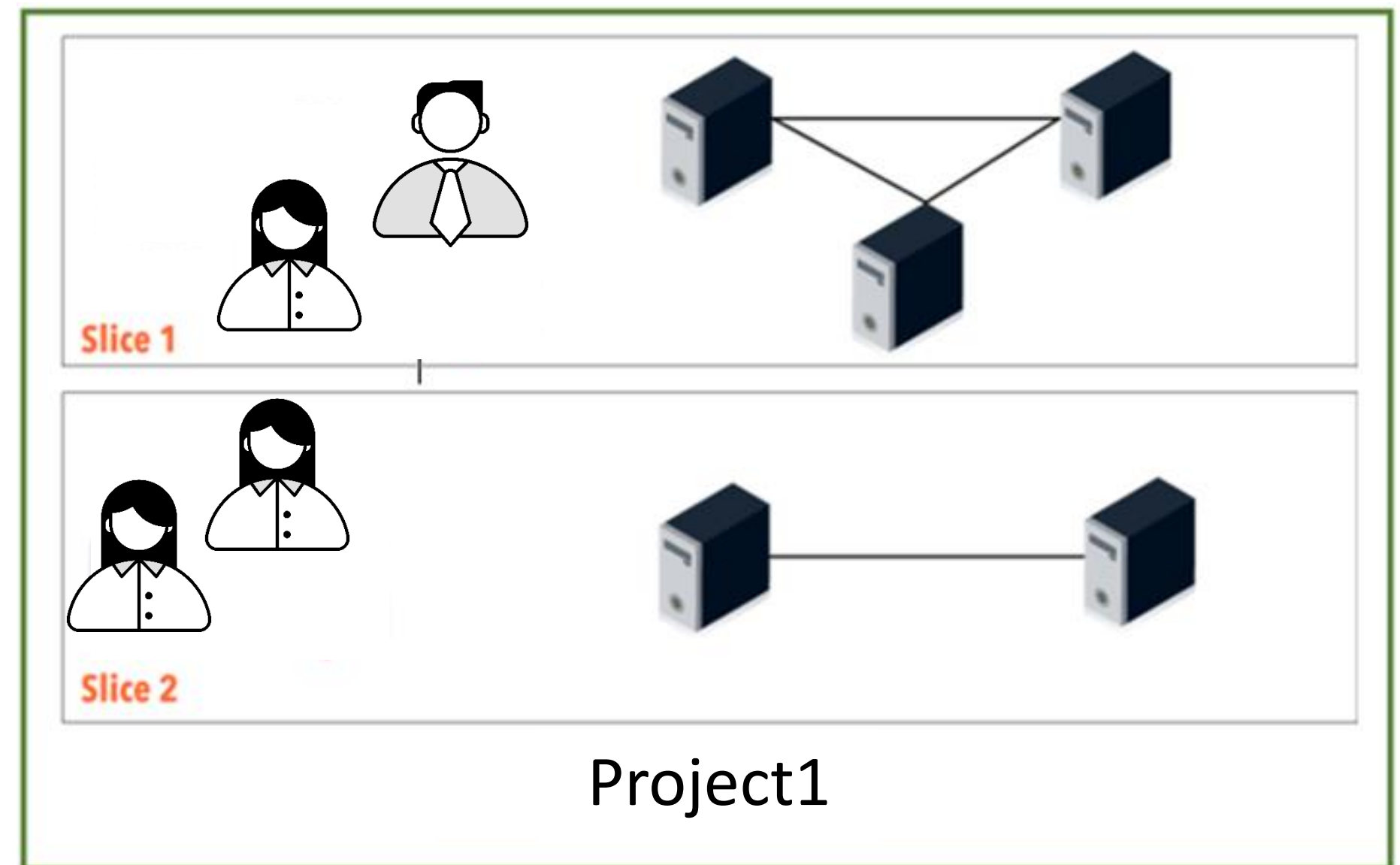
## Project

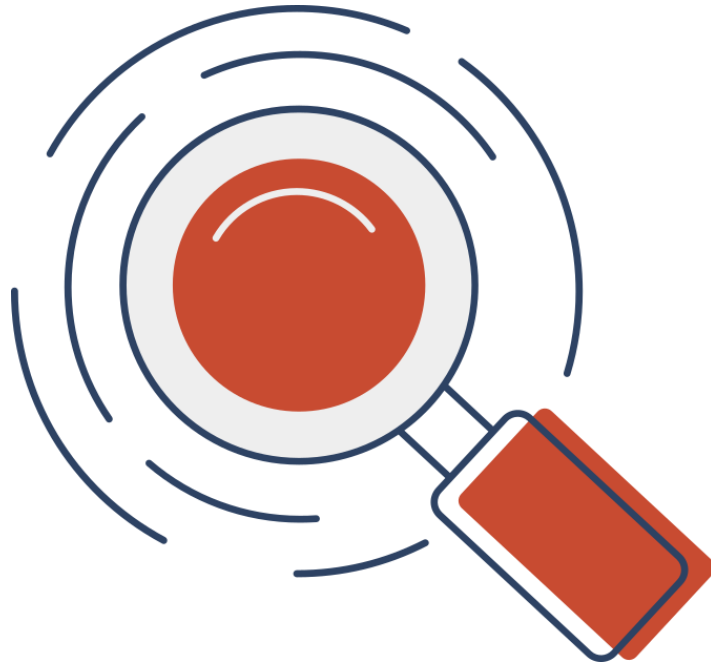
- Managed by a Lead.
- A container of users and their slices.
- A user may be member of various projects.



## Slice

- A container where *resources can be reserved*.
- Ensures full isolation.





## Research/Development

- Future Internet architectures
- Software Defined Networks (SDN)
- Large-scale evaluation of smart network protocols
- Security



## Education

- Networking and distributed systems
- Cloud computing
- IT, Security, System administration



## Projects personal

- Mini projects
- Hands on labs
- Proof of concepts

A brilliant idea

"I have a good idea."



"It will never work."



"But I don't have the resources to test"





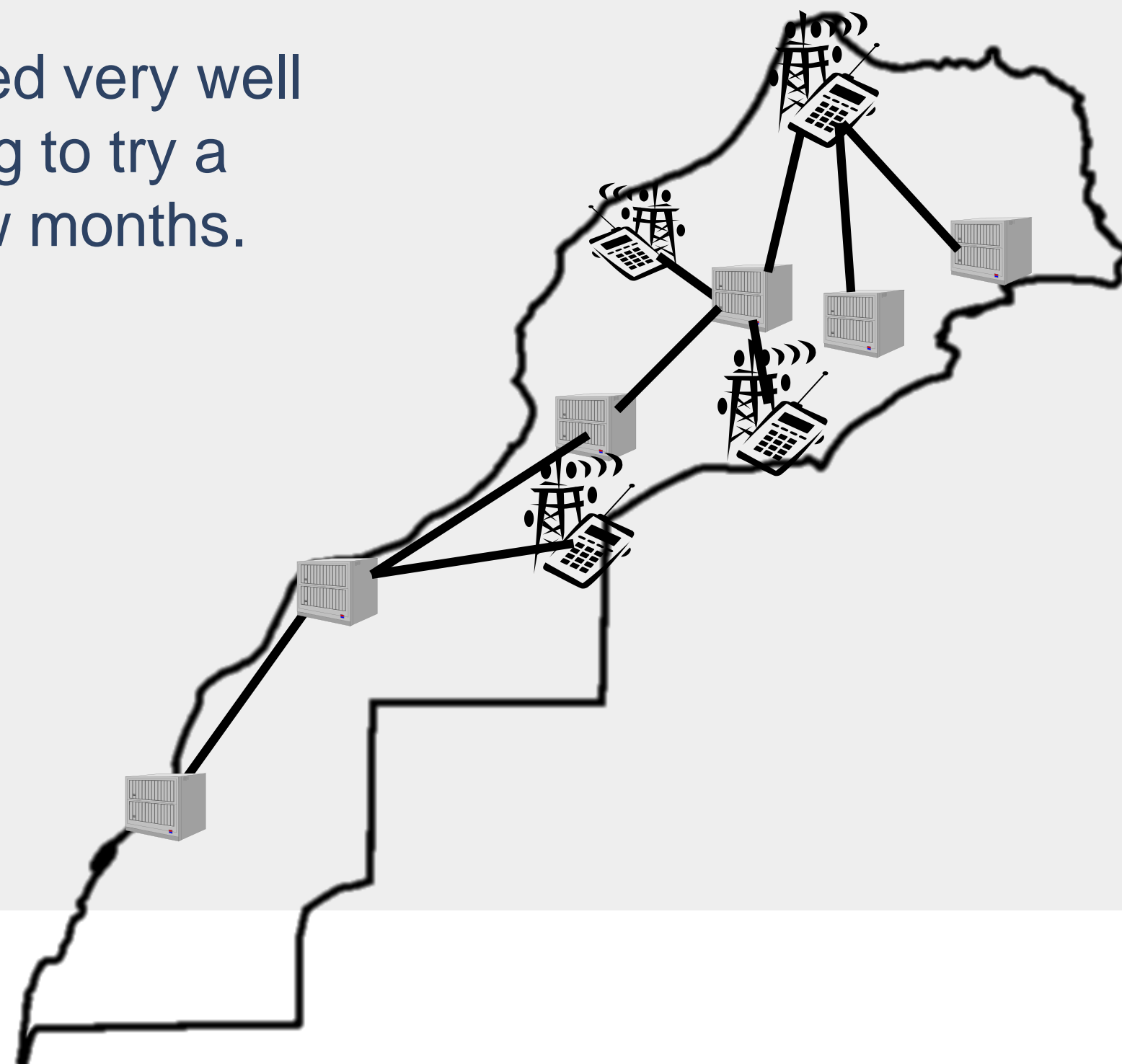
## Mouzn is...



- A cloud platform allowing users to manage their projects and slices.
- Includes simple tools for booking resources (IaaS), do tests and create labs.
- More to come in the future (offering multi-region pooling, containers as a, Storage, DB...)

let's try it !

My new architecture worked very well in the lab, so now I'm going to try a larger experiment for a few months.



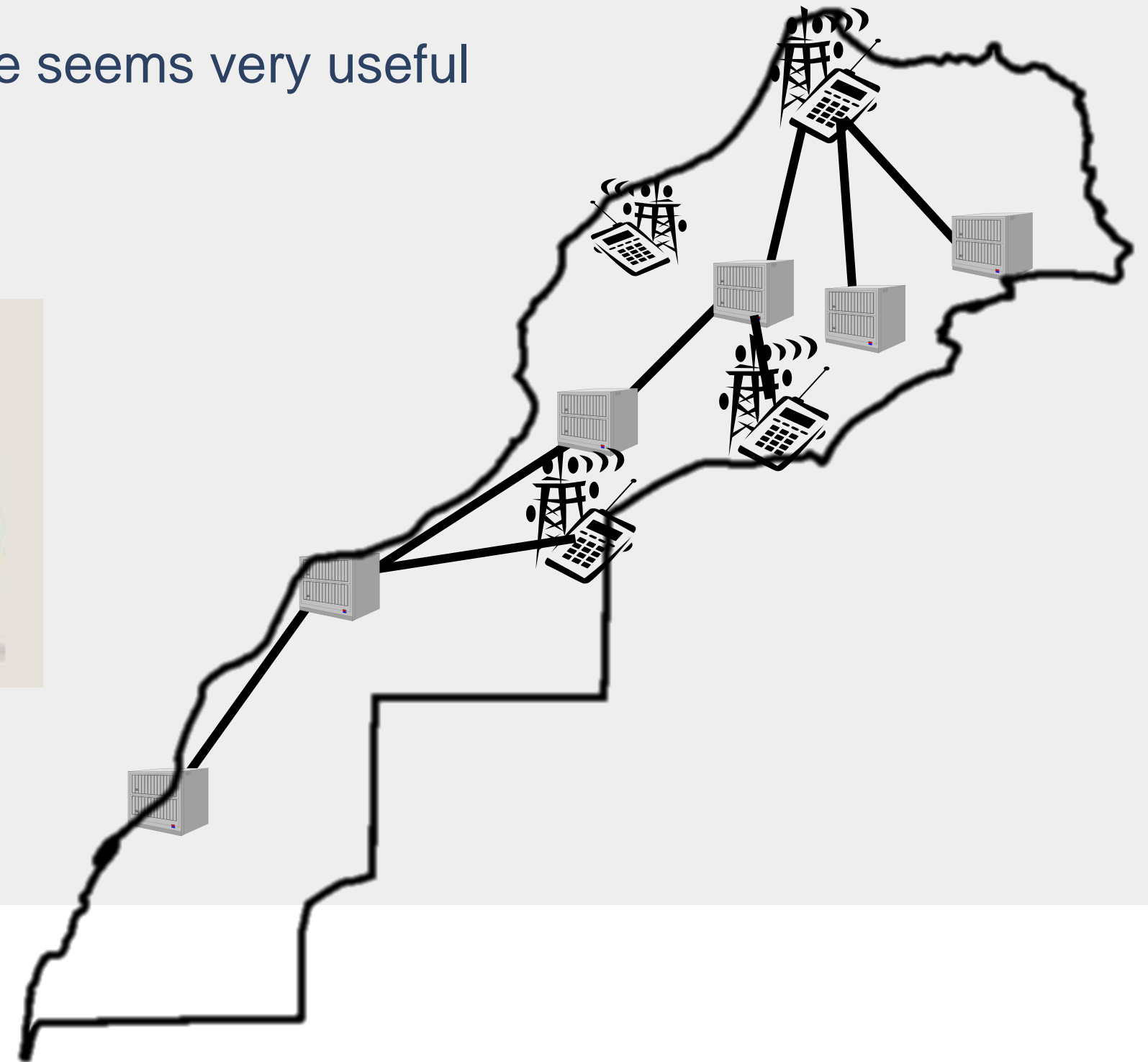
It uses a slice of **Mouzn**, sharing its infrastructure with many other competing experiences.

# Mouzn:How can you use it?

it becomes a very good idea



This service seems very useful



His slice Mouzn keeps getting bigger, but Mouzn continues to conduct many other simultaneous experiments.



# Discussion and Questions

Thank you for your  
Attention

