

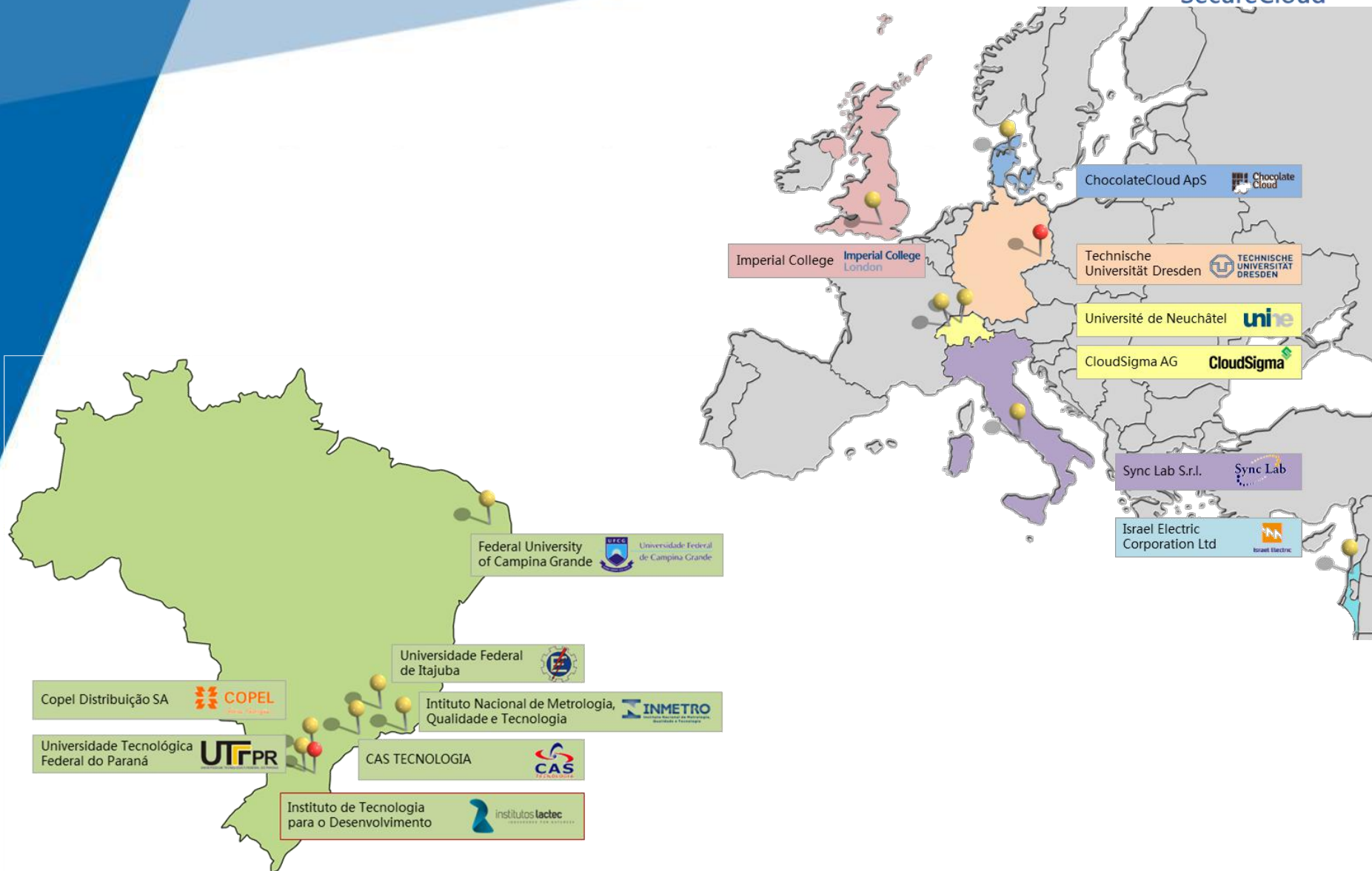
# SecureCloud

Secure Big Data Processing in Untrusted Clouds

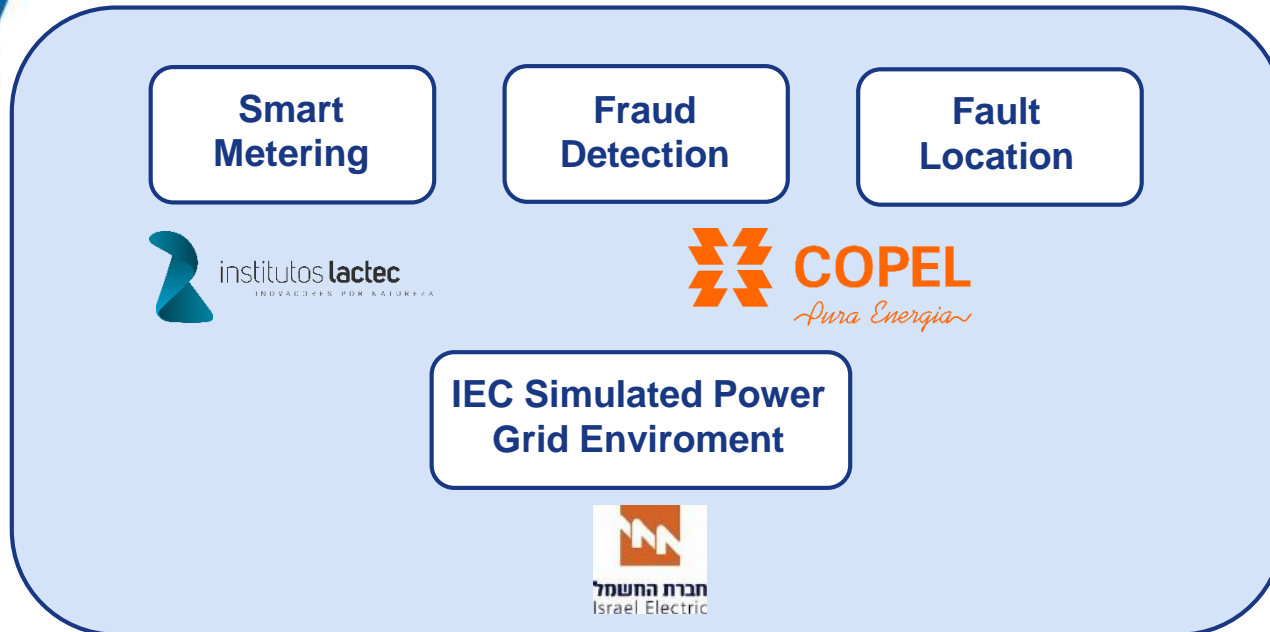
A bird's eye view of the project

Prof. Daniel E. Lucani, PhD

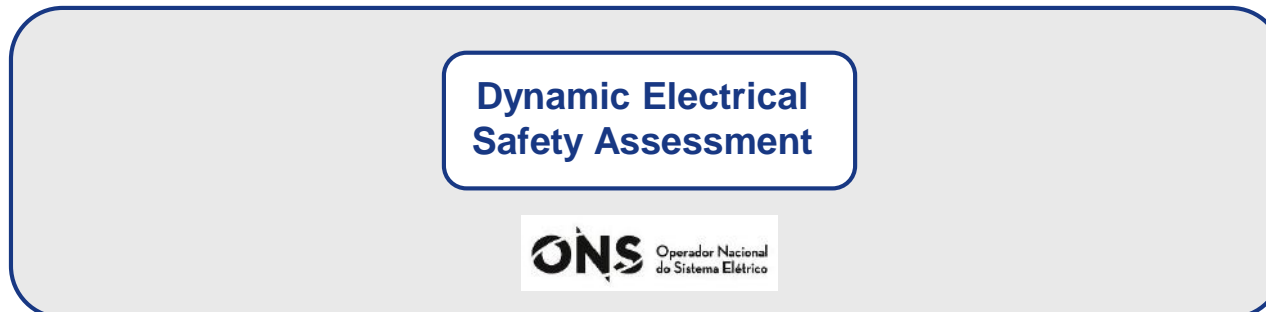
# Use case overview



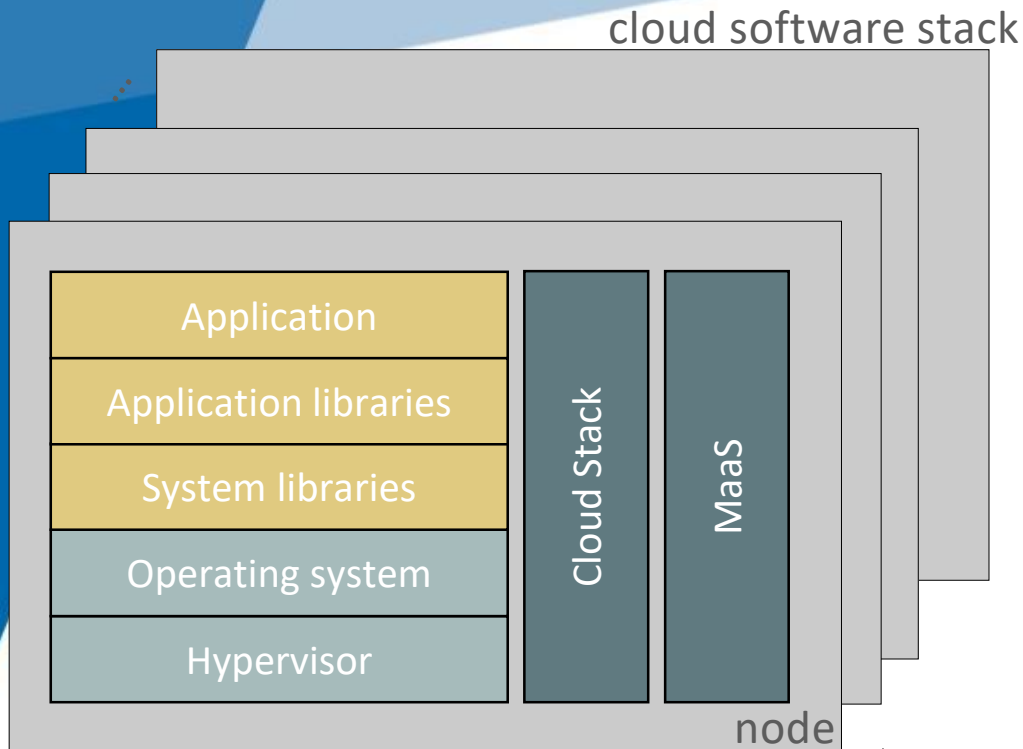
## Privacy - Preserving Smart Metering



## QoS – Guaranteeing Smart Grid



# Defender's Dilemma

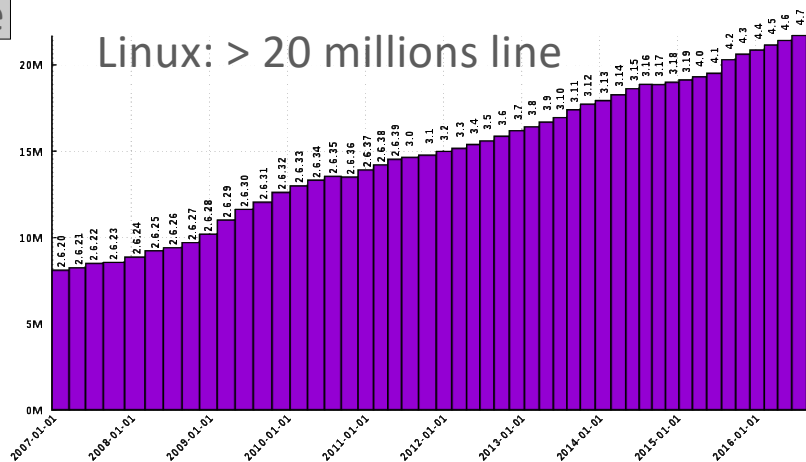
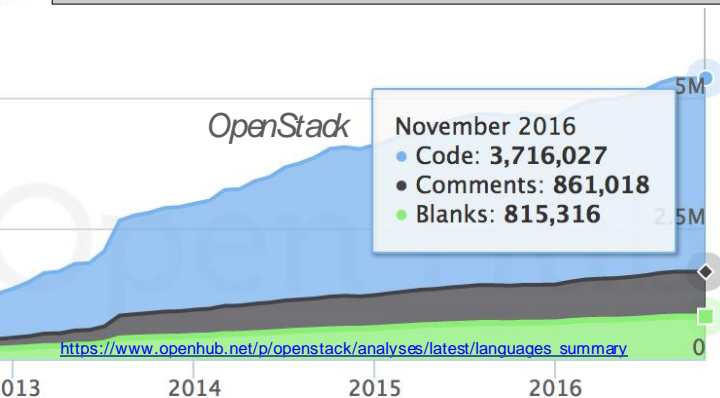


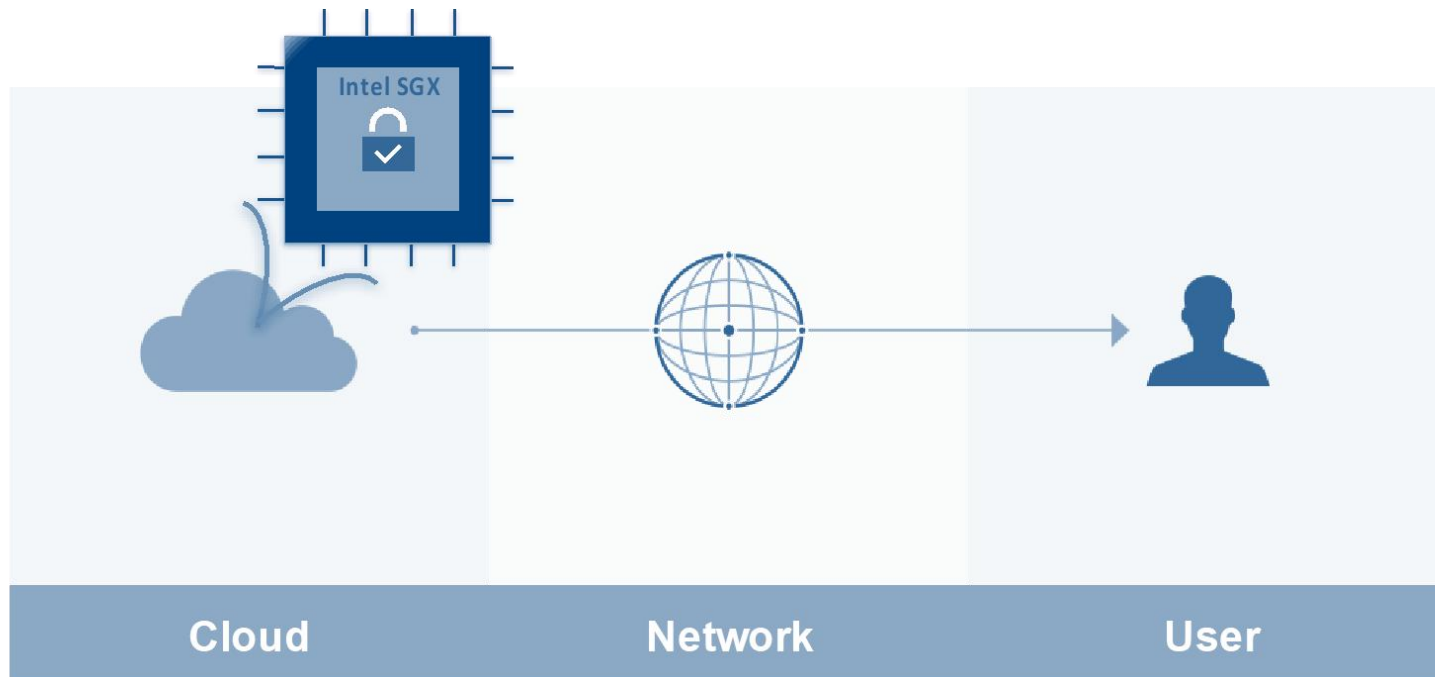
## Defender:

must protect against every vulnerability  
millions of lines of source code

## Attackers:

success by exploiting a single vulnerability

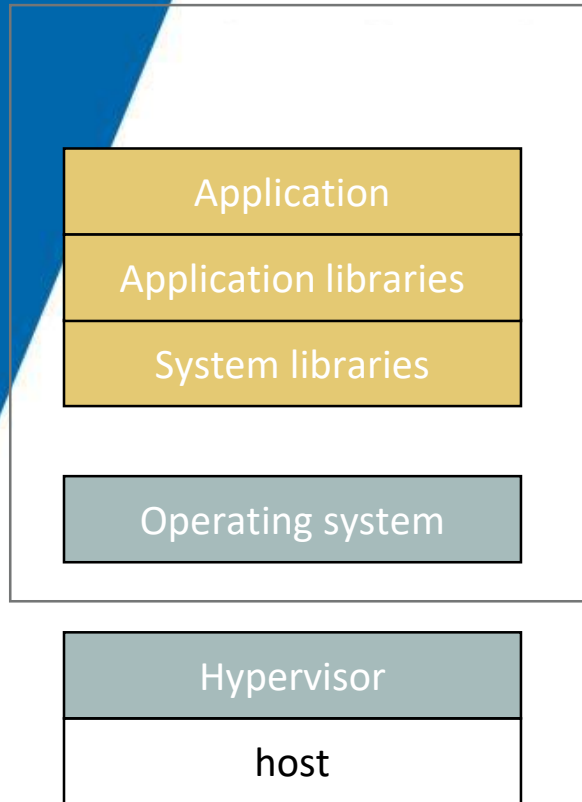




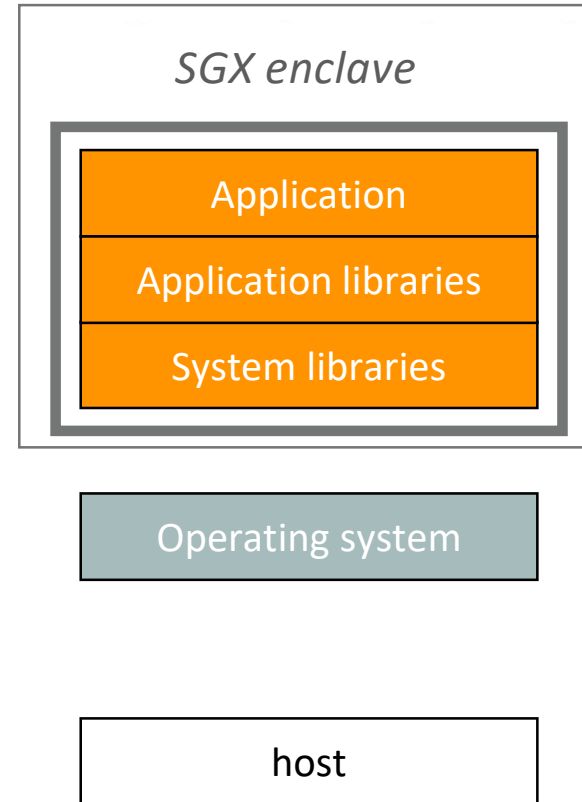
# Secure Containers



virtual machine (VM)



secure container



hardware virtualization

operating system virtualization

*secure containers are more light-weight and more secure than VMs*

## **Practical & timely approach:**

lots of industry interest in SecureCloud platform  
TUD considers startup to commercialise TUDs  
technology

## **Publications:**

SAC2017, EuroSys2017, DATE2017, IC2E2017,  
IPDPS2017, PDP2017, BITCOIN'17  
Middleware2016, OSDI2016, IEEE Security &  
Privacy

## **Demonstrators:**

Please come to the 15h session for one of them

# Main Achievements

